

# AGRICULTURAL OUTLOOK

August 1988

• Economic Research Service  
United States Department of Agriculture



**Farmers and  
the Drought**

# AGRICULTURAL OUTLOOK

August 1988/AO-144



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# In Brief . . . Effects of the Drought on Crops and Livestock

The early and widespread drought this year has created new problems for farmers, many of whom were just recovering from the financial stress of the early 1980's.

Major spring wheat, corn, soybean, oats, and barley areas had below-average rain and above-average heat through the spring and into the summer. Crop production estimates in early July were down sharply from month-earlier expectations based on normal weather.

Estimates for 1988/89 were down 29 percent for corn, 12 percent for soybeans, and 13 percent for all wheat. Based on planted acres, about 26 percent of the wheat crop was planted this spring and was subject to severe loss in yield from the drought. The rest of the wheat was planted in the fall and was little changed by weather this spring.

This spring and summer's drought has hurt nonirrigated fruits and vegetables, especially dry edible beans, tart cherries, green peas, sweet corn, and snap beans for canning. Fresh vegetable production tends to be irrigated and has survived the dry, hot weather relatively well.

Pasture and range conditions as of July 1 were the worst since records began in 1921. Farmers have had to sell some breeding stock from pastures, and the increased need for supplemental feeding has driven up the price of hay. Therefore, the supply of meat products is increasing, and prices received for livestock and hogs are dropping. Production of poultry and eggs is slowing.

Increased sales at lower prices of animals producing red meat and stronger prices for poultry and eggs are maintaining livestock cash receipts. Higher feed costs, however, may push livestock enterprises from profits in the first half of 1988 to losses in the second. By next year, meat supplies will be lower, prices



received higher, and feed costs may be lower.

Reduced output of major crops and the associated drawdown in carryover stocks are increasing prices received, usually by more than enough to offset reduced yields. Crop prices had already begun to rise before the severity of the drought became apparent.

Crop values as of early July were expected to be higher than they would have been with normal weather. This year's cash receipts are up because of higher crop values and sales from past years' crops in storage at drought-increased prices. However, farmers hit hardest by the weather are expected to have much lower receipts.

Deficiency payments will fall markedly in the fourth quarter of 1988 because market prices are generally well above the loan rate and in some cases could exceed target prices. However, much of the drought-related adjustment in payments will occur in calendar 1989. With expected crop insurance and disaster relief, Government payments for calendar 1988 from all sources may fall only moderately.

Net cash income for 1988 is estimated about the same as last year's \$56 billion. But net farm income, reflecting the decline in production, will be down by \$1-6 billion in 1988. Although little overall change is expected in income, regional disruptions are arising because income differs sharply among individual farmers from what it would have been with normal weather.

Drought-reduced capacity and high demand are straining the U.S. grain transportation system. Barges, river elevators, and ports on the Great Lakes have had their volume reduced by low water. Record demand for rail and truck service is likely to exceed capacity. So shippers face sharply increased transportation costs.

No food shortages are expected as a result of the drought. Some food products will be in short supply, but others are plentiful because certain regions and crops were not affected by the drought and because carryover stocks are being drawn down. Food prices likely will rise 3-5 percent this year, about 1 percentage point more than they would have with normal weather.

U.S. farm exports in fiscal 1988 will be little affected by the drought. Much of the trading was done before the drought. Prices are higher, and stocks are being drawn down to nearly maintain the volume previously expected. Export value is expected to increase by \$5.6 billion from a year earlier, and export volume by 16 million tons.

Farm banks were better poised, as farmers entered this spring's planting season, to deal with losses from agricultural loans than they were a few years ago. Nevertheless, more agricultural banks could fail than earlier expected because banks headquartered in the hardest hit drought counties are also among the most vulnerable to bank failure.



## Agricultural Economy

Farmers and consumers are feeling the effects of stunted crops, higher feed prices, low water in rivers, and forage problems for livestock. The drought created new problems for farmers just recovering from the financial stress of the early eighties.

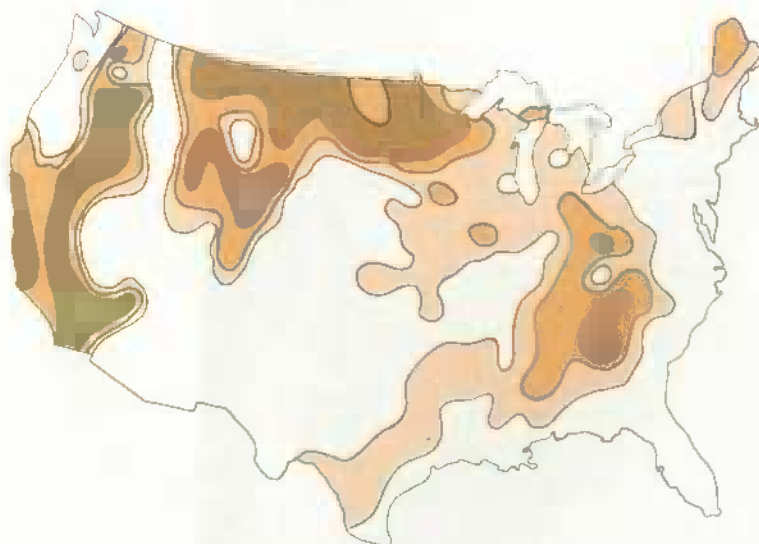
However, consumers will continue finding large supplies of moderately priced food because the drought came in a year of record meat supplies and sizable stocks of most food items. The quality of some items may suffer, and a few will be in short supply. Other items, such as many fruits and vegetables, are irrigated and will not be seriously affected by the drought.

Prices of some foods will be higher, and consumers may change the mix of foods they consume. Overall, retail prices may rise 3-5 percent in 1988, about 1 percentage point more than they would have with normal weather.

The drought's effect on farmers is serious and complicated. In the aggregate, 1988 net cash income will not change much from last year. Crop prices are rising, reflecting lower yields and reduced stocks. The dryness came so early in the year that much of the 1987 crop is being sold at higher prices, and fall-planted crops were not seriously affected. The combination of reduced out-

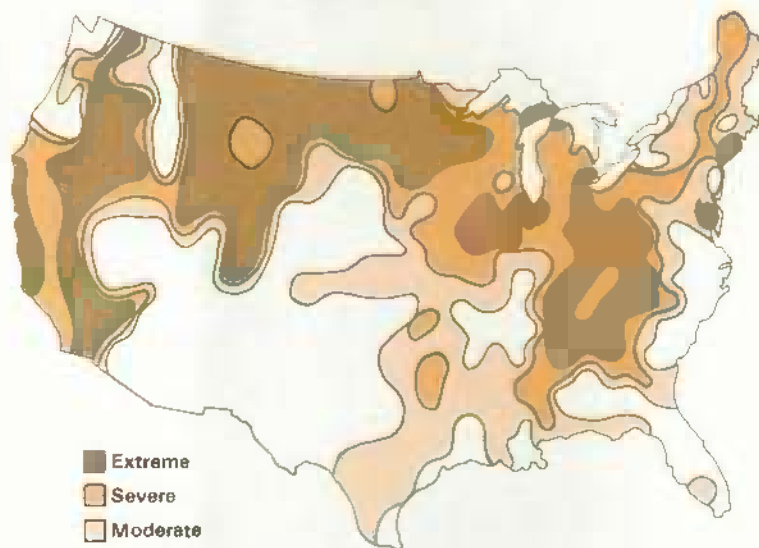
By Early June the Drought Was Already Critical...

June 11th



... And By Mid-July It Was Wider and Deeper

July 16th



■ Extreme  
 ■ Severe  
 ■ Moderate

put and higher prices could result in a moderate increase in cash receipts for crops from a year earlier.

Livestock producers in some areas face pasture and range deterioration and higher feed costs. Bringing feed to livestock on parched pastures and ranges is often prohibitively expensive. Some breeding stock and feeder cattle are being sold for slaughter, adding to meat supplies this summer and fall, depressing farm prices, and reducing retail meat prices. Total cash receipts for livestock producers likely will not change much with the drought; lower prices will be

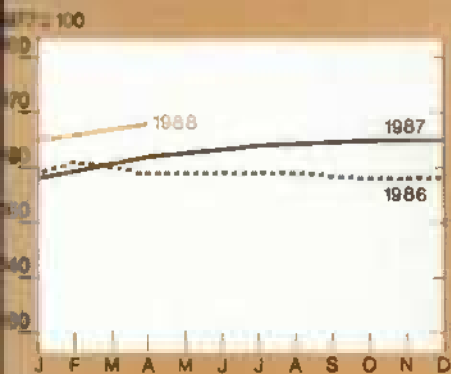
nearly offset by increased volume. However, with higher feed costs, livestock earnings will be lower than they would have been with normal weather.

Deficiency payments to growers of program crops will be lower because prices are higher. But, other Government payments to farmers, for crop insurance and disaster aid, may be higher.

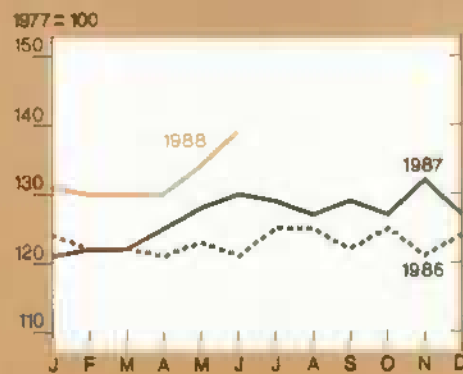
Production expenses could change a little. Some costs (such as purchased feed) will go up, while others (such as costs of

# Prime Indicators of the U.S. Agricultural Economy

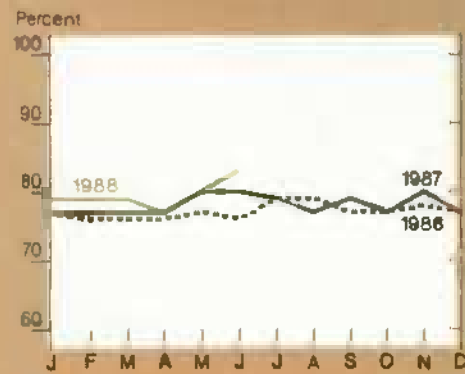
Index of prices paid by farmers<sup>1</sup>



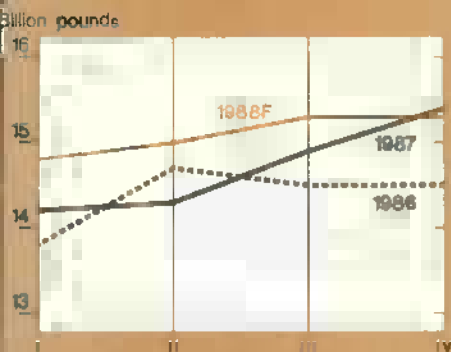
Index of prices received by farmers<sup>2</sup>



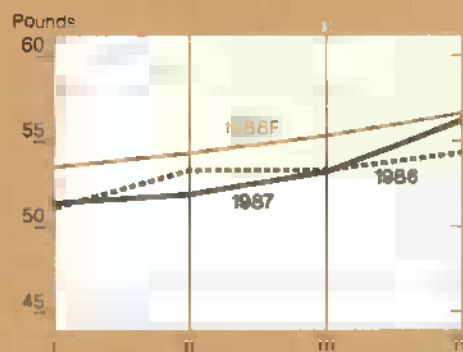
Ratio of prices received to prices paid



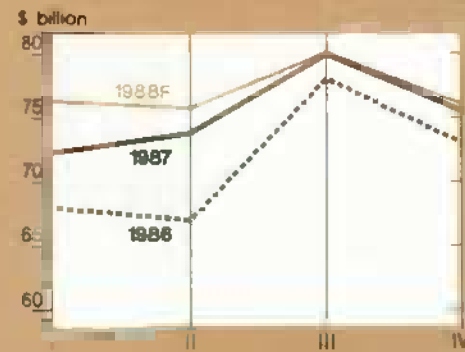
Red meat & poultry<sup>3</sup>  
production



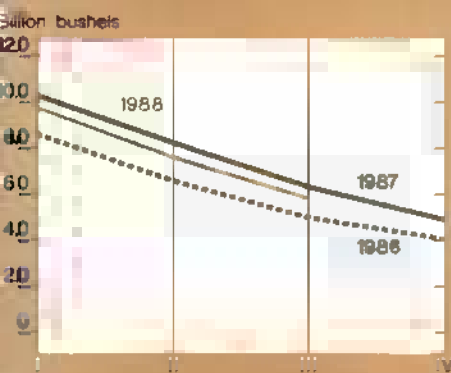
Red meat & poultry  
consumption, per capita<sup>3,4</sup>



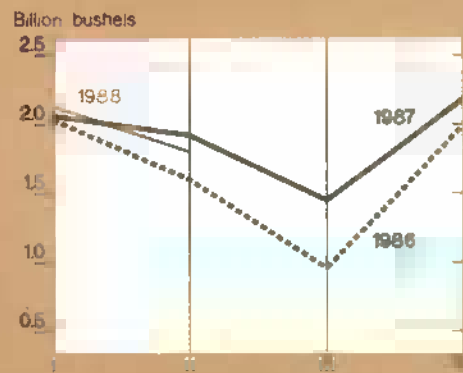
Cash receipts from  
livestock & products<sup>5</sup>



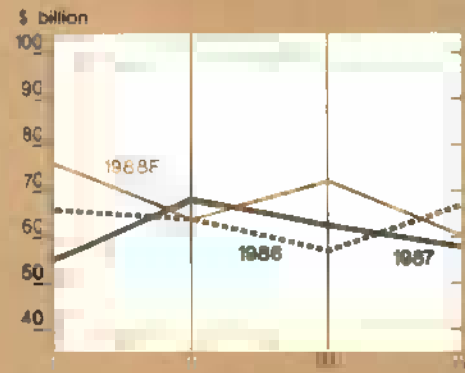
Corn beginning stocks<sup>6</sup>



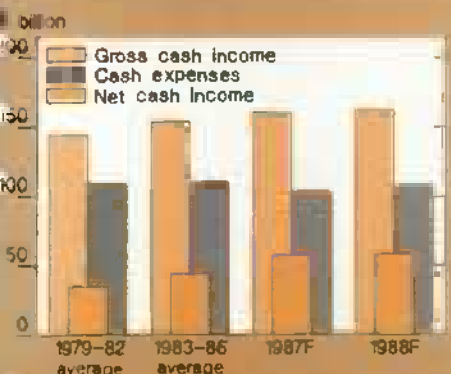
Corn disappearance<sup>6</sup>



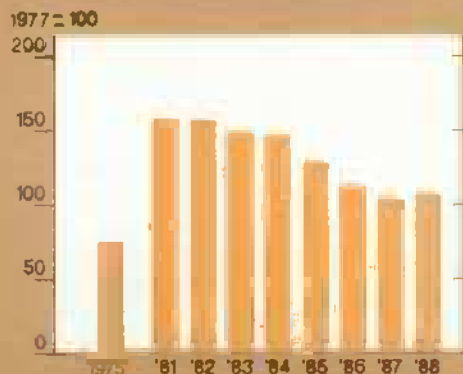
Cash receipts from crops<sup>5</sup>



Farm net cash income



Farm real estate values



Farm value/retail food costs



<sup>1</sup>For commodities and services, interest taxes, and wages. <sup>2</sup>Beginning in 1986 data are only available quarterly. <sup>3</sup>For all farm products. <sup>4</sup>Calendar quarter. Future quarters are forecasts for livestock, corn, and cash receipts. <sup>5</sup>Retail weight. <sup>6</sup>Seasonally adjusted annual rate. I=Jan.-Feb.; II=Mar.-May; III=June-Aug.; IV=Sept.-Nov. F=forecast.

cattle bought by feedlots) will go down. And farmers can draw down inventories for sale at higher prices. Thus, the drought may not change the bottom line much for the farm sector as a whole. Cash income will be maintained near 1987 record highs.

Individual farmers, however, are experiencing a wide variety of impacts from the drought, some leading to income loss and others to gain. Those farmers in the Northern Plains who will not harvest a spring wheat crop because of the drought and who have no crop insurance may lose the most. Corn yields are down sharply, and soybean yields are also off from a year earlier.

Livestock and poultry incomes will be lower as rising feed costs eat into profits. The industry was experiencing one of its better years as the year began; demand by feedlots was strong, while the supply of feeder cattle was off. Forced movement from pastures and declining returns to cattle feeders are depressing feeder cattle prices, thereby reducing returns from feeder cattle in coming months.

Some farmers will find their income boosted by the drought. Wheat farmers in winter wheat areas who received adequate moisture and escaped serious disease problems will combine good yields with higher prices. Farmers who irrigate their crops likely will maintain high yields, although their production costs may rise as they pump more water from greater depths.

Net cash income for 1988 will about equal last year's \$56 billion. Net farm income will be lower than last year's \$46 billion because the measure includes the reduction in assets incurred by selling off inventories of last year's crop.

Although the income of the sector as a whole is little changed from what it likely would have been with normal weather, incomes of individual farmers are changing, with some doing better by selling at higher prices, while others who have little to sell are facing a crisis. [Don Seaborg (202) 786-1880]

## Livestock Overview

Livestock farmers face a cost-price squeeze in the second half of 1988. Feed costs rose sharply during June as the drought stressed spring-planted crops in many of the major crop-producing States. U.S. range and pasture condition as of early July was the worst since records were started in 1921. Higher feed costs are slowing the rate of increase in poultry production, raising the number of gilts and sows slaughtered in second-half 1988, and boosting nonfed beef slaughter through the sale of potential replacement heifers and cows.

The midyear *Hogs and Pigs* report indicated 8 percent more hogs and pigs on farms than a year ago. As of June 1, producers intended to have 7 percent more sows farrow in second-half 1988 than a year earlier. Second-half 1988 pork production likely will be up 9 percent in 1988, the same as the first-half increase, and first-half 1989 production may increase 4 percent. However, continuation of the drought would further increase slaughter in second-half 1988 and decrease it in first-half 1989.

Declining feeder cattle prices in June, following record-high levels this spring, were partly the result of large meat supplies. Feeder cattle prices dropped in response to lower fed cattle prices and rising feed costs. Lower feeder cattle prices reduce returns to cow-calf producers, but the more immediate problem is that of poor pasture and water conditions.

Although forages from farm program acreage are helping to relieve shortages, there will be more pressure to reduce the cattle inventory if pastures continue to deteriorate. Beef production is projected to decline 2 percent in 1988, mostly in the nonfed sector. Choice steer prices at Omaha are expected to average \$68-\$71 per cwt, up from 1987's \$65.

Higher broiler prices have more than offset rising feed costs. Estimates of the broiler hatchery supply flock suggest that broiler production in early 1989 may be near year-earlier levels. Turkey producers lost money in 10 of the past 12 months, according to ERS budget estimates. As a result, producers have cut back poult placements for second-half 1988 and production may be 5 percent

below that of a year earlier, after having risen 25 and 13 percent in the first and second quarters.

### *Cattle Prices Down, Feed Costs Up*

Cattle on feed inventories in the seven monthly reporting States totaled 7.8 million head on June 1, 3 percent above a year earlier and higher than any June since 1978. Feedlots placed cattle at record levels during May, with net placements above 2 million head and marketings at 1.7 million head.

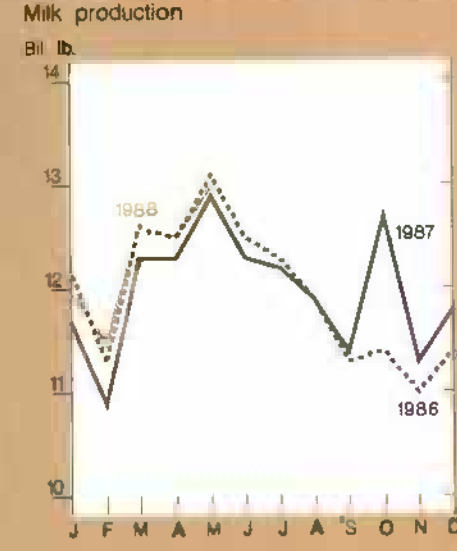
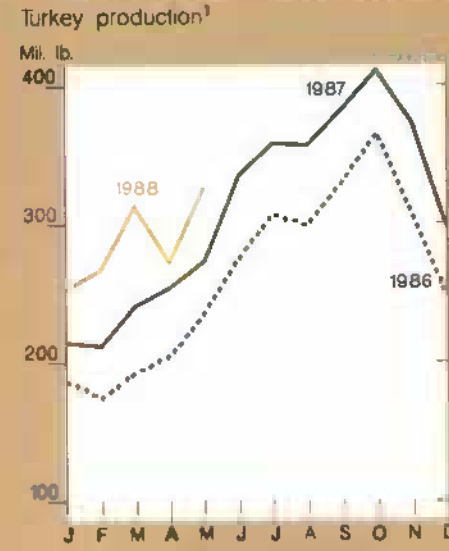
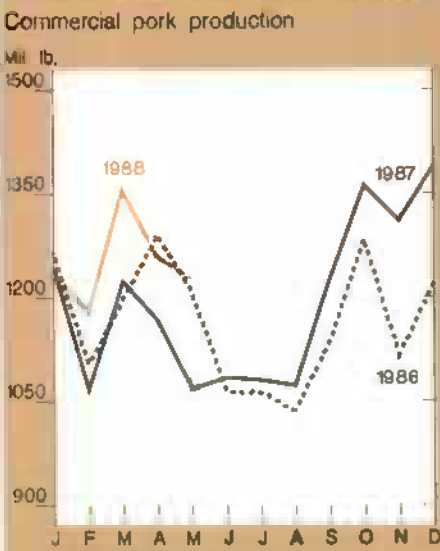
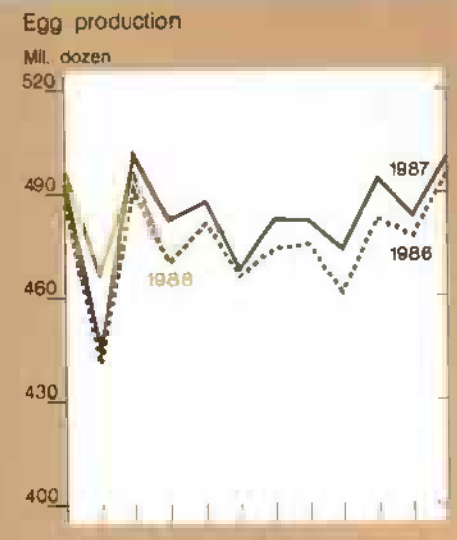
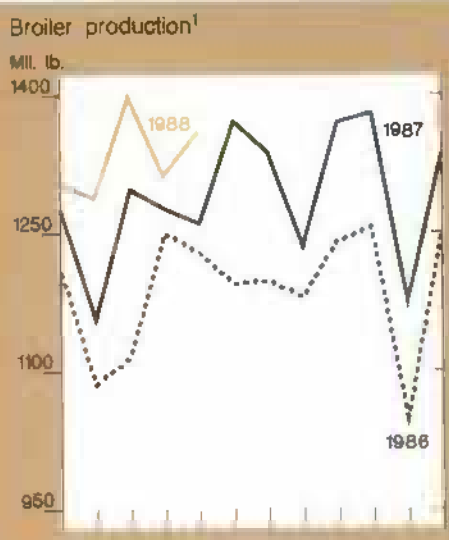
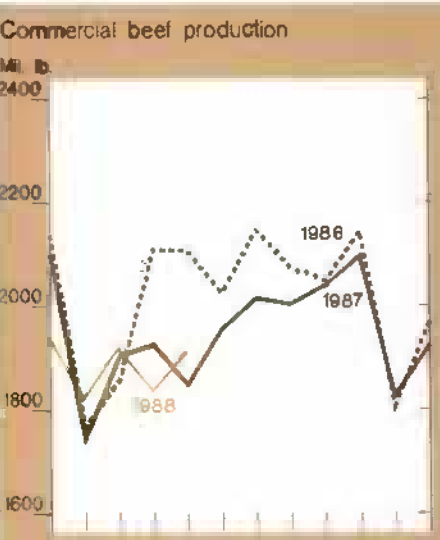
Many cattle came into the lots in excellent condition off spring wheat pasture and should grade Choice by the end of August. Most of these feeder cattle were purchased before the drought, when prices ranged in the low \$80's per cwt rather than their current price in the low \$70's. Forecasted prices for fed cattle in August-September are about \$10 per cwt below estimated breakeven prices, so feeders' earnings earlier this year could switch to losses of over \$100 per head by late summer.

Losses of this magnitude would dampen the demand for replacement feeder cattle, forcing stocker-feeder cattle prices down. The outlook would become even grimmer if autumn rains fail to regenerate fall and winter pastures and additional cattle are forced off pastures. Whether these cattle end up on grass or in a feedlot, prices for them are uncertain. The tightening margins expected for fed cattle through the summer and into the fall may lower prices for lighter cattle and possibly for this year's calf crop, regardless of declines in the inventory of lighter cattle.

### *Beef Slaughter Up in Third Quarter, Down in Fourth*

Third-quarter beef production is expected to increase to about 5.5 billion pounds, 3 percent above the spring quarter but still 2 percent below a year earlier. Most of the decline from last year will continue to come from nonfed/processing supplies; second-half cow slaughter is expected to decline 2 percent from 1987 despite some stressed sales of foundation stock. Third-quarter fed beef supplies will remain near those of a year ago and likely will keep slaughter cattle

# Production of Livestock and Products



<sup>1</sup>Federally inspected production, ready-to-cook.

prices in the mid-\$60's per cwt, with instances of prices moving lower if supplies begin to back up.

However, tighter feeder cattle supplies and expected declines in feedlot placements this summer could reduce fourth-quarter production by as much as 8 percent from the third quarter. Price gains can then be anticipated, with fed cattle once again averaging near \$70. Yearling feeder cattle prices are likely to rise to the low \$80's by mid-November.

### *Hog Inventory Higher*

The inventory of all hogs and pigs in the United States on June 1 totaled 56.2 million head, 8 percent above a year earlier and the highest June 1 inventory since 1983. Expansion began in mid-1986 and continued through 2 years of relatively high returns. It accelerated in the first half of 1988, as evidenced by a large increase in farrowings and upward revisions in both the December 1987 and March 1988 inventories.

The March-May pig crop was estimated at 25.8 million head, up 8 percent from a year earlier. Farrowing intentions for 10 States in June-November showed an increase of 7 percent. Earlier intentions had indicated a rise of only 2 percent for the spring and summer quarters.

Rising hog slaughter and liquidation of large cold storage stocks likely will depress hog and pork prices in the third quarter. The seasonal peak in hog prices probably occurred in early June, and prices could decline through the summer for the first time since 1979. Barrows and gilts at the seven major markets may average \$43-47 per cwt in the third quarter, down sharply from \$58.97 a year ago. In the fourth quarter, prices may average between \$37 and \$43 per cwt, as hog slaughter reaches the highest in 5 years.

### *Egg Production Falling, Prices Up*

Egg production during the first 5 months of 1988 was nearly 1 percent below a year earlier. Significant reductions in the laying flock continue, reducing the capacity of the industry. For 1988 as a whole, production is expected to fall nearly 1.3 percent. Wholesale egg prices rose from less than 49 cents per dozen in mid-March to more than 65 cents by the

end of June. Producers as a group experienced negative net returns in 12 of the past 14 months, according to ERS budget estimates. Producers face an uncertain future as their production costs rise because of the drought. Feed costs per egg are rising because of higher crop prices and rising transportation costs.

The total laying flock (both table- and hatching-type hens) as of June 1 was 2.6 percent below a year earlier, while the table-type flock was down 3.3 percent. Indicators of the future size of the laying flock, such as chicks hatched and placements to hatchery supply flocks, suggest that the downsizing will continue.

The number of eggs per 100 layers was up about 0.6 percent in May from a year earlier, and up 1.5 percent by June. This improved laying rate partially offset the reduced flock size; total egg production was 1.4 percent below a year earlier in May. Table egg production during April-May was 2.7 percent below a year earlier.

Wholesale prices in New York (grade-A large) averaged 55 cents per dozen in the first quarter and 53 in the second. Third-quarter prices are expected to range between 64 and 68 cents per dozen. For the fourth quarter, prices are expected to be even higher because of tight supplies.

### *Broiler Outlook Bright in Short Term*

The 12-city wholesale broiler price averaged 61 cents per pound during June. Boneless breast prices in the Northeast rose to \$2.79 per pound and remained strong during June, reflecting promotions in the fast-food industry. Rising prices improved profits, but higher feed costs could narrow margins during the second half of 1988.

Broiler production is forecast to increase 4 percent during 1988. First-quarter production was about 7 percent above a year ago. Average slaughter weights during first-quarter 1988 were less than 1 percent above 1987. Production in the second quarter likely was 5 percent above a year ago.

The hatching-egg flock on June 1 was 2 percent above a year ago, but egg sets during May were even with the previous year, indicating an underutilization of broiler egg-laying capacity. The estimated broiler hatchery supply flock in December is 2 percent below December 1987.

The 12-city wholesale composite price for broilers during the second quarter was 55 cents per pound. Prices will remain high, but be tempered by large supplies of all meats during the third quarter. Prices will average in the 56-60 cent range, because of higher summer demand. Fourth-quarter prices will soften seasonally, averaging in the 49-55 cent range. The average price for 1988 is expected to be 51-54 cents.

### *Poultry Export Growth Continued Through April*

U.S. broiler exports were up 12.5 percent—to 225.4 million pounds—during January-April 1988 compared with a year earlier. Value, however, was up only 0.3 percent because unit export value dropped 11 percent.

During January-April, broiler exports to the fast-growing economies of Japan, Hong Kong, and Singapore amounted to 55 percent of the total, compared with 49 percent a year earlier. Exports were up about 20 percent to the Caribbean, at nearly 37 million pounds. Mexico took 66 percent more than a year ago. Mexico is attempting to expand meat supplies and hold down consumer prices as part of its inflation-fighting program.

Exports to Egypt under the Export Enhancement Program (EEP) were down 35 percent; Egypt did not allocate foreign exchange for broiler meat imports. Iraq increased domestic production and reduced imports under EEP from a year ago. However, exports under EEP were up to Spain's Canary Islands and to the Persian Gulf countries.

U.S. broiler prices have been below those in Europe, but are rising as prices in Europe decrease. In West Germany, June 14 broiler prices, at \$1,593.00 per metric ton, were 3.2 percent below a year earlier. The EC export subsidy was \$666.00 per MT, 55 percent above a year earlier, further increasing Europe's price competitiveness.

If the upward price movements of late April, May, and June continue in the United States and if the value of the dollar remains stable, U.S. broiler exports likely will stabilize or even fall a little.



## Drought Is Hurting Livestock Industry

Depending on the severity and duration of spreading drought conditions, the consequences for livestock producers will be severe in both the shorter and longer term. Meat production in the second half of 1988 will be greater and prices received lower than they would otherwise have been as producers are forced to slaughter less-efficient animals from their breeding herds. Prices will be somewhat lower for the rest of 1988 than they would have been without the drought.

As producers sell off some breeding stock, the long-term capacity of the industry will be lowered. The increased slaughter in 1988 will lower production in 1989 and prices will rise again.

Dry weather will affect the beef cattle industry in two major ways. First, cattle feedlot operators depend on feed grains. As the drought decreases feed supplies and increases feed costs, the costs of feedlot operations will increase.

Second, cow-calf producers, who provide calves to feeders, will be hit the hardest. Calves are the major cost in the cattle feeding industry. As the price of feed rises, cattle feedlot operators will decrease the price they are willing to pay for feeder cattle.

The cow-calf producer's major feed is forage. The drought has reduced yields on grazing land as it has on cropland. Production of forage per acre is reduced, forcing cow-calf producers to reduce their herds or to supplement feeding with hay.

The first cattle to move off drought-stressed pasture usually are the yearling cattle that normally go into feedlots. The next to move are replacement heifers, which were intended to go into the breeding herd, and older, less productive cows. The last to move are the more productive cows. The sale of cattle off drought-stressed pasture and range further reduces prices for all cattle.

The drought affects hog producers mostly through higher feed costs. Many hog farmers produce some or all of their feed grains. As corn yields on these farms are reduced by drought, producers will either have to purchase additional grain or send hogs to slaughter early. The drought also increases soybean meal prices, further increasing hog production costs.

Increased culling of the breeding herd boosts short-term production and reduces prices received. It will also reduce production in 1989. Feeder pig producers are squeezed more than farrow-to-finish hog farmers, much like the cow-calf producers in the beef industry.

The drought hit the broiler industry in similar ways. Higher grain and soybean meal prices are raising feed costs. Broiler production may fall in the second half of 1988 and in 1989 relative to normal conditions. Because broilers have a shorter production cycle, the broiler industry can respond more quickly to the higher feed costs and can decrease production more quickly than either the cattle or hog industries.

The drought will increase the costs of livestock production and will reduce the quantity produced after an initial surge. As with previous droughts, if next year's grain and forage crops are near normal and if grain prices drop and livestock prices soar because production is down, meat production will then become further depressed as profitability improves and as producers hold animals from slaughter to rebuild their breeding herds.

Livestock tend to eat less and move around less in hot weather. They can stand the heat better when the humidity is lower, as it is this year. Hog and poultry producers in confinement operations can use misters and fans to cool their animals. These methods are more effective with less humidity. Although some loss of livestock production can be attributed to the heat this year, its overall effect has been minor. The drought's major effect has been to raise feed costs. [John Ginzel and Richard Stillman (202) 786-1286]

## Turkey Production Expected To Drop Later in the Year

The rate of increase in turkey production appears to be leveling. Turkey hatchery reports indicate that placements for March, April, May, and June 1988 were 1, 8, 5, and 5 percent, respectively, below a year ago. Coupled with placements in January and February 1988 of 3 and 8 percent above a year ago, cumulative placements for 1988 slaughter since September 1987 were 4 percent ahead of a year earlier. Turkey eggs in incubators on June 1 were down 4 percent. Production in 1988 likely will be up 5 percent.

First-quarter 1988 production, at 837 million pounds, was about 25 percent above a year ago. Poultry placements indicate second-quarter turkey production will be up about 13 percent. Production will slow dramatically in the third and fourth quarters from a year earlier, with projected decreases of 5 percent in both quarters.

Turkey stocks, at 422 million pounds on June 1, were approximately 42 percent greater than a year earlier. As turkey production levels, or possibly drops below 1987, the stock buildup is expected to slow.

Wholesale prices for hen turkeys in the Eastern region averaged 51 cents per pound during the second quarter, down from 56 cents a year earlier. Turkey prices are expected to rise seasonally as holiday buying picks up during the third and fourth quarters, although ample supplies of chicken and pork will buffer the price rise. Prices likely will average 65-69 cents during the third quarter and 70-76 cents during the fourth. Prices during 1988 are expected to average 58-61 cents, compared with 58 cents in 1987.

The turkey industry lost income in 9 of the past 11 months, according to ERS budget estimates. With rising feed prices due to weather conditions, losses are likely to continue, in spite of rising wholesale hen turkey prices. The drought could further slow production during 1989.

## Wholesale Dairy Prices Strengthening

Although butter, cheese, and nonfat dry milk prices remained below those a year

earlier during second-quarter 1988, prices began a broad early-seasonal rise in June. Tightening milk supplies since last winter provided the background for stronger wholesale prices. Prolonged hot temperatures and drought conditions further trimmed available milk supplies. In the case of butter, seasonal increases in cream use and the corresponding drop in churning strengthened prices.

During the second week of June, Grade A butter prices at the Chicago Mercantile Exchange moved above support purchase prices for the first time since the second week of December 1987. By early July, exchange prices were running 3 cents above support. Cheese prices also have risen. Early July prices on the National Cheese Exchange were up almost 7 cents for barrel cheese and almost 3 cents for 40-pound blocks.

Nonfat dry milk prices have risen slowly but steadily since early May. In early July, prices in the Central States were about 76 cents per pound, up 3 cents from April. Prices were about 3 cents higher in eastern and southern areas. Substantial premiums for spot loads were common.

In early July, dry whey prices were about 27 cents per pound, about 80 percent above the early April price. Dry whey prices have increased continuously since early April, reflecting a strong whey market and tight supplies. Dry butter-milk prices continued climbing, partly because of a strong call by ice cream makers. Whey protein concentrate sold for about 72 cents per pound.

Further price increases are quite likely, with the possible exception of butter. Seasonal factors and expected tightness in international markets probably will boost prices of nonfat dry milk and other high protein products. Higher nonfat dry milk prices and expected strong commercial use are likely to increase cheese prices. However, butter prices may not rise much more unless commercial use of cream-based products recovers, or all dairy markets tighten greatly. [Kevin Bost and Leland Souhard (202) 786-1767]

**For further information contact:** Kevin Bost, hogs; Mark Weimar, Bob Bishop, and Larry Witucki, broilers, turkeys, and eggs; Steve Reed, cattle; and Sara Short, dairy. All are at (202) 786-1285.

## Field Crop Overview

Large areas of the United States, including major spring wheat, corn, and soybean areas, had below-average precipitation and above-average temperatures throughout the spring and into the summer.

Springtime precipitation was only 25-50 percent of normal for much of Montana, North and South Dakota, Iowa, and Illinois, and the Mississippi, Missouri, Ohio, and Tennessee Valleys. Parts of western Washington and Oregon, however, benefited from above-normal spring rains in April and May. Spring wheat, corn, and soybean crops were stressed in May-June by temperatures ranging as much as 15 degrees above normal in some cases.

During June, limited, spotty precipitation in the northern and central Plains States did little to ease the drought and did not significantly improve crops. In other areas, moisture losses coupled with continued high temperatures (frequently 95-105 degrees) continued to stress crops. Reports of plants wilting as a result of continued dryness became relatively common.

The effect of the drought on futures prices has been mixed. Commodity trading prices generally rose in early-season anticipation of reduced domestic supplies of wheat, corn, and soybeans. Futures prices at times rose by the maximum daily limits, only to fall sharply in the days following. Price increases have generally been large relative to output decreases, so the value of this year's crops is higher than it would have been with normal weather.

Canada has also been hurt by dry weather. Projections of Canadian wheat and barley production are lower than last month's. But drought in Canada is less widespread than in the United States. Wheat production is forecast at 21 million tons and exports at 18 million, down 17 and 14 percent, respectively, from last month. Barley production is down 7 percent to 10.5 million tons.

### *Domestic Spring Wheat Prospects Decline*

Drought and high temperatures reduced domestic spring wheat prospects for 1988/89. The forecast for U.S. total

wheat outturn is 1,840 million bushels, down from just over 2,105 million bushels in 1987/88.

Of the total this year, 1,162 million bushels, or about 85 percent, is winter wheat. Winter wheat outturn was largely unaffected by this spring's hot and dry conditions, and yields were high. However, yields were reduced somewhat by pest and disease problems, particularly in Kansas and Nebraska.

Spring wheat yields—including both Durum and Hard Red Spring varieties—bore the brunt of the hot and dry conditions. Montana, North and South Dakota, and Minnesota (States where the bulk of the domestic spring wheat is grown) all reported poor or very poor crop conditions as of early July.

The anticipated reduction in domestic use and trade of total wheat is modest relative to the expected drop in output. So, ending inventories for 1988/89 will be down. Total ending wheat stocks are forecast at only 666 million bushels, down 600 million from 1987/88 and the lowest since 1975.

Projected average prices received by wheat producers for 1988/89 have been revised upwards, to \$3.45-\$3.95 per bushel reflecting the tighter supply. Season-average price in 1987/88 was \$2.57 per bushel.

### *World Wheat Markets Tighter*

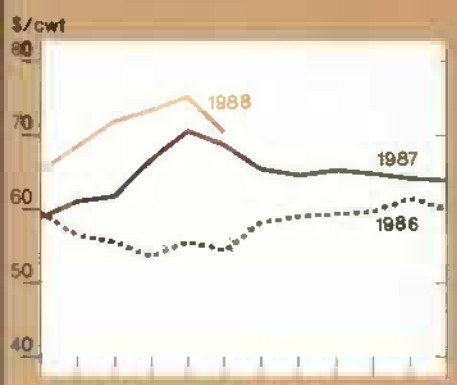
Although foreign wheat production in 1988/89 is forecast to rise 4 percent, drought in the United States and Canada will reduce world supplies available for export. Exportable supplies of Durum and spring wheat will be especially tight.

Production increases are expected in major importing countries, including the Soviet Union and China. World wheat consumption, forecast at 534 million tons and about the same as 1987/88, will again exceed production, which is projected at 516 million tons. But world trade is expected to fall 6 percent to 97 million tons because of higher prices and larger production by importers.

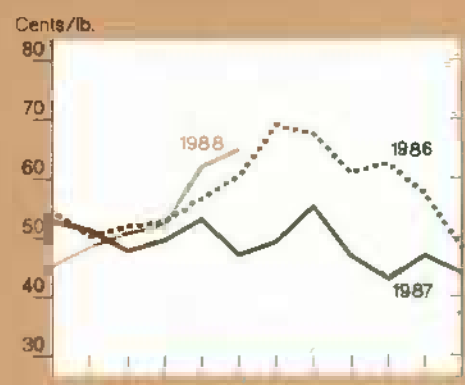
U.S. wheat exports are forecast to fall 10 percent to 37 million tons (1,350 million bushels). The U.S. share of world exports likely will be 38 percent, 4 percent less than in 1987/88.

# Commodity Market Prices

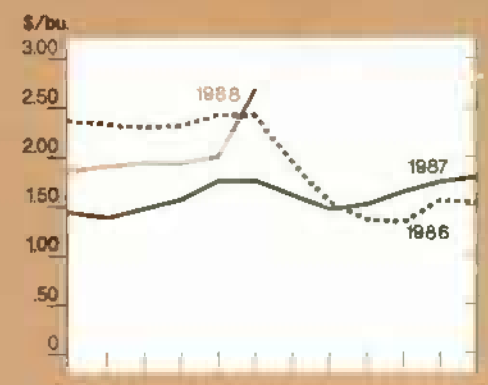
Choice steers, Omaha



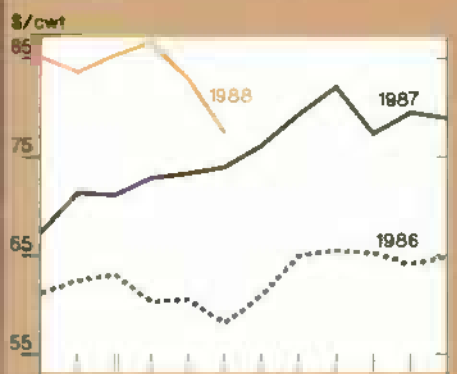
Broilers, 12-city average



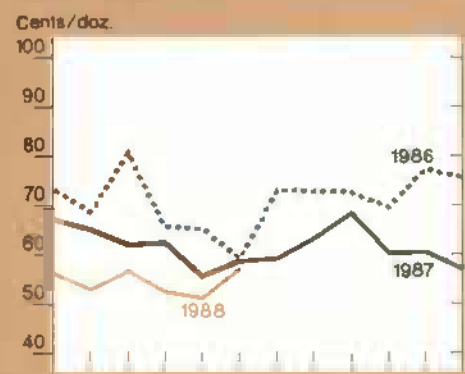
Corn, Chicago<sup>3</sup>



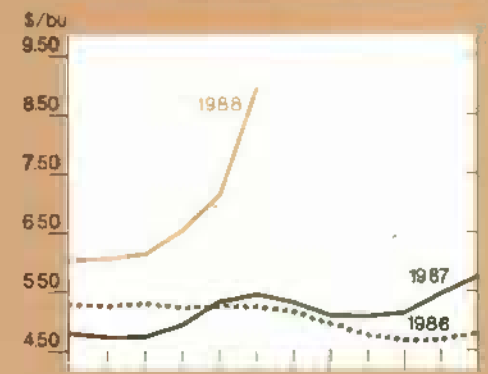
Feeder cattle, Kansas City<sup>1</sup>



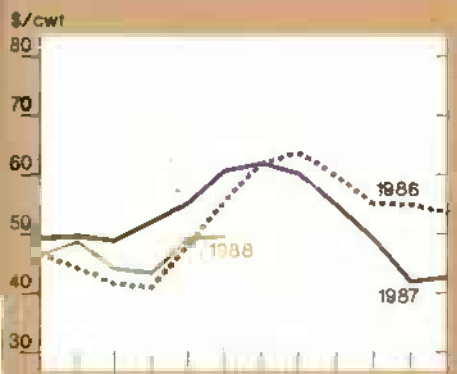
Eggs, New York<sup>2</sup>



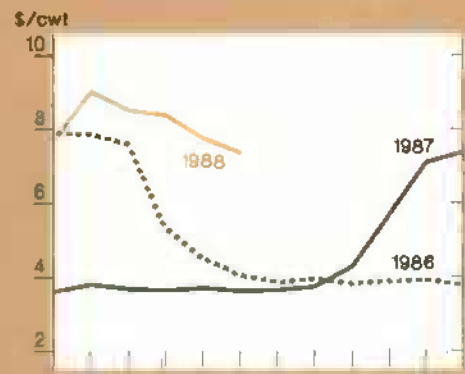
Soybeans, Chicago<sup>4</sup>



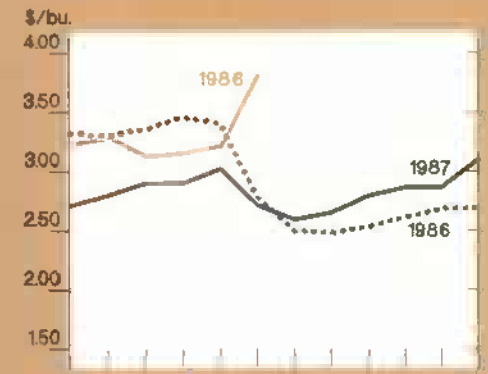
Barrows and gilts, 7 markets



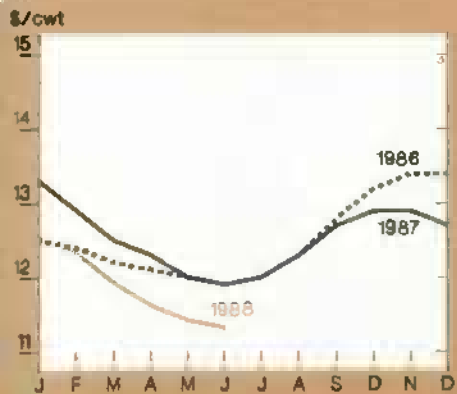
Rice (rough), SW Louisiana



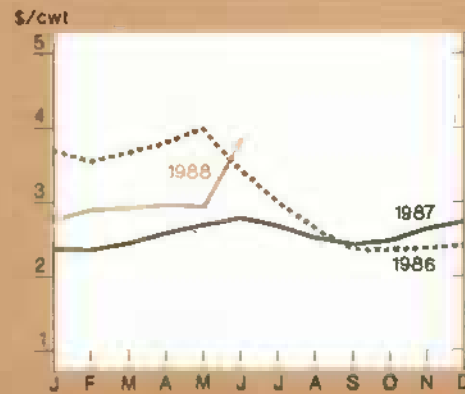
Wheat, Kansas City<sup>6</sup>



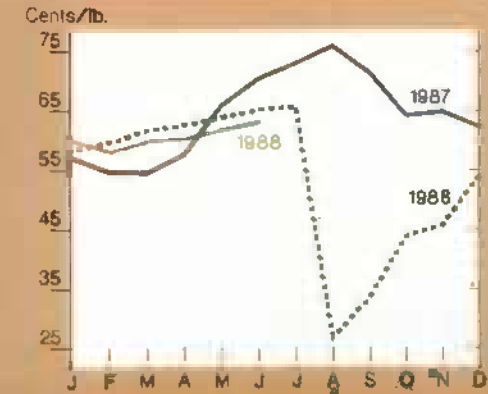
All milk



Sorghum, Kansas City



Cotton, average spot market



<sup>1</sup>600-700 lbs., medium no. 2    <sup>2</sup>Grade A Large

<sup>3</sup>No. 1 Yellow,    <sup>4</sup>No. 2 Yellow,    <sup>5</sup>No. 1 HRW,

<sup>6</sup>No. 1 HRW,

Some exporters, such as the EC and Eastern Europe, may capture market share by shipping increased quantities of wheat to North Africa. Both the EC and Eastern Europe are expected to harvest larger crops than in 1987/88.

But potential exportable supplies of other producers, whose wheat competes primarily with the still-adequate U.S. winter crop, are less clear. Australia has low wheat supplies coming into 1988/89. Although Australia expanded planted area, most planting took place prior to the recent sharp price increases. Australian expansion has been limited by wet weather in the south and by high prices for wool. Argentina could expand plantings, but major wheat areas there are dry, which has slowed planting.

#### *Domestic Corn Prospects Decline*

Drought in much of the Midwest and Southeast reduced corn prospects significantly. Corn damage was judged severe because of widespread dry conditions over most of the Corn Belt. Daytime temperatures frequently soared to more than 90 degrees throughout much of the Southeast, stressing crops there.

The U.S. corn production forecast for 1988/89 is 5.2 billion bushels, down about 2 billion from the forecast 1 month earlier, and down from an outturn of 7.1 billion bushels in 1987/88.

Estimates of the use of corn for feeding and export also have been reduced, reflecting expected domestic and international decisions to scale back use as prices rise.

The season-average producer corn price forecast for 1988/89 was raised to \$2.45-\$2.85 per bushel. The price for 1987/88 is also higher, estimated at \$1.90-\$2.00 per bushel.

Despite drought-reduced production, the corn supply situation is not tight. The 1988/89 season began with domestic corn inventories of 4,365 million bushels. Although this is below 1987/88 by 11 percent, ample stocks remain. Ending corn stocks are forecast at 2,355 million bushels, down 46 percent from a year earlier. However, in earlier years, such as 1983/84 and 1984/85, stocks have been even lower.

Even though the U.S. corn export forecast was lowered 100 million bushels from last month, the drawdown of U.S. corn stocks will prevent a sharp reduction in 1988/89 exports because of the drought. Forward sales, particularly to Japan, are up sharply compared with recent years but sales later in the season are expected to drop. U.S. corn exports are forecast at 41.9 million tons (1,650 million bushels), down 3 percent from 1987/88.

Foreign coarse grain production is projected at a record 586 million tons. Foreign corn production is expected to rise to 274 million tons, 4 percent over 1987/88. Southern Hemisphere competitors, mainly Argentina and South Africa, could expand area if prices remain high when they start to plant in the next couple of months. In the Northern Hemisphere, where corn is already planted, Thailand, China, and the EC are expecting good crops. A large increase in 1988/89 exports is forecast for Thailand, while China and the EC are projected to maintain exports at the 1987/88 level.

#### *U.S. Soybean Exports Drop*

Domestic soybean production in 1988/89 is forecast at 1,650 million bushels, down 12 percent from previous estimates for the year and down 13 percent from the estimate of 1.9 billion bushels for 1987/88. With total use exceeding production by 9 percent, yearend inventories are expected to fall to 145 million bushels, but remain adequate as exports drop.

As a result of reduced U.S. crop prospects and lower stocks, producers' season-average soybean prices for 1988/89 are forecast in the range of \$6.75 to \$9.25 per bushel for 1988/89, up from \$6.20 for 1987/88. World prices are also much higher.

Higher prices are likely to encourage further soybean expansion in the Southern Hemisphere when the 1988/89 planting occurs 2-3 months from now. Argentina is projected to raise planting area dramatically, shifting pasture into soybeans and increasing double-cropping with wheat, producing a forecast record of 11 million tons, 11 percent over 1987/88. Brazil's production is expected to reach 19.5 million tons, bringing total foreign soybean production up 7 percent.

U.S. soybeans, soybean meal, and soybean oil exports in 1988/89 are expected to drop sharply because of higher U.S. prices and larger foreign production. Brazil and Argentina are forecast to significantly increase their soybean and product exports. U.S. soybean exports are forecast to decline by one-fifth to 625 million bushels (17 million tons). U.S. soybean meal exports are projected at 5 million metric tons, 17 percent less than in 1987/88, and soybean oil exports are estimated at 567,000 tons compared with 953,000 in 1987/88.

Higher prices could reduce consumption somewhat among important soybean importers, such as the EC. Nevertheless, foreign crush is projected to rise almost 3 percent.

#### *U.S. Cotton Production And Use Down*

Some of the domestic cotton crop has been stressed by the season-long drought, with a couple of States in the Southeast and the Delta reporting crop conditions as fair to poor. Late planting delayed the crop in the Far West. U.S. outturn in 1988/89 is forecast at 13.7 million bales, down 7 percent from 1987/88. Consumption is also lagging, further increasing domestic ending stocks, which are expected to rise to 7.4 million bales, or 22 percent of the global total.

In contrast, foreign cotton stocks are projected to decline slightly as better weather pushes foreign production up 8 percent to 70.5 million bales. All the major northern producers—China, the Soviet Union, India, Pakistan, Egypt, and Turkey—are expecting production near or better than that in 1987/88. China's crop is expected to reach 21 million bales, up 8 percent. The Soviet Union's is forecast up nearly 1.1 million. India is likely to recover from last year's drought and produce 8.3 million bales. And at 6.75 million, Pakistan will approach its 1987/88 record.

But strong production growth will expand already competitively priced foreign supplies. And an 8-percent increase in foreign exports is expected to reduce the U.S. market share from 28 to only 21 percent in 1988/89. U.S. exports are projected to fall 1.6 million bales to 5.0 million.

Cotton consumption in exporting countries is expected to increase enough

## Generic Certificate Update

As of May 31, 1988, about \$20.1 billion of generic certificates had been issued since April 1986. Total certificate redemptions as of July 12, 1988 approach \$18.7 billion, placing near-term availability at \$1.4 billion.

Future issuances for 1988, including the balance of advance diversion payments for wheat, feed grain, upland cotton, and rice producers in June, as well as Export Enhancement Program (EEP) and Targeted Export Assistance (TEA) payments, could bring total certificate availability for the rest of fiscal 1987/88 to \$2.4 billion. July Findley deficiency payments for wheat, oats, and barley producers were in cash rather than certificates. Certificates were trading at par value in most locations in mid-July.

An estimated \$2.2 billion of certificates were exchanged from May 31 to July 12. If exchanges were to continue at this pace for the remainder of the quarter, a record \$4.1 billion would be exchanged.

However, limited certificate availability should slow the pace. With corn FOR loans in release status, producers can redeem their FOR loans with cash without facing penalties. Merchants and producers should have less need to use certificates to gain access to corn stocks.

Certificate exchanges for corn continue to account for the bulk of exchanges. From May 31 to July 12, over 84 percent of total exchanges were for corn. Over this period, 309 million bushels of CCC corn stocks were exchanged with certificates, which accounted for 37 percent of total corn exchanges.

Corn will continue to dominate as the demand for corn stocks grows with deteriorating crop conditions. However, towards the end of the fiscal year and the beginning of fiscal 1988/89, certificate exchanges for cotton likely will grow in importance as 1987-crop cotton goes into extended loan status (see Commodity Spotlight "Cotton Marketing Loans: How Are They Working?"). [Joe Glauber (202) 786-1840]

Cumulative Generic Certificate Exchanges as of July 12, 1988

Commodity 1/	Unit	CCC Inventory 2/	Producer Loans	Total
<b>Food grains:</b>				
Wheat--				
Volume	Mil. bu.	746.5	611.0	1,357.5
Value	Mil. \$	1,917.9	1,536.2	3,454.1
Rice--				
Volume	Mil. cwt	42.2	0.4	42.5
Value	Mil. \$	154.0	1.6	155.6
<b>Feed grains:</b>				
Corn--				
Volume	Mil. bu.	1,169.2	6,824.2	7,993.4
Value	Mil. \$	2,319.5	11,476.9	13,796.4
Grain sorghum--				
Volume	Mil. bu.	137.8	449.9	587.8
Value	Mil. \$	246.1	639.8	886.0
Barley--				
Volume	Mil. bu.	92.3	151.8	244.1
Value	Mil. \$	144.9	243.2	388.1
Rye, oats, soybeans:				
Value	Mil. \$	19.7	33.9	53.5
Cotton:				
Volume	Mil. bales	0.89	6.14	7.03
Total value 3/	Mil. \$	4,802.4	13,931.6	18,734.0

1/ Other program commodities, for which few or no exchanges have been made, include honey, nonfat dry milk, butter, and cheese.  
2/ CCC loans as of July 8, 1988. 3/ Does not include values for cotton exchanges.

Source: Agricultural Stabilization and Conservation Service, USDA.

to just offset reduced demand among major importers such as the EC, Japan, Taiwan, Korea, and Hong Kong. At 75.3 million bales, foreign use is forecast only 1 percent above 1987/88.

## U.S. Rice Production And Use Are Up

U.S. rice crop conditions are generally reported as good to fair in the South and California in spite of adverse weather and pest conditions. However, soil and water quality problems have caused some concern, as have pests in other areas.

U.S. rice production for the 1988/89 crop year is forecast at 159 million cwt, up significantly from each of the 2 previous years. Rice supplies, estimated at 194 million cwt, are about 11.4 million cwt above the 1987/88 crop, nearly matching the projected increase in total use. Thus, only a small change in yearend inventories is projected.

Drought in Asia in 1987/88 reduced world rice production, decreased exportable supplies, and increased prices. Short supplies may reduce Asian competition in late 1988, thereby improving market opportunities for U.S. rice until the Asian 1988/89 crops are harvested in December/January.

Asian exporters are likely to respond to the higher 1987/88 prices by expanding 1988/89 plantings. Foreign production in 1988/89 is projected to reach 320 million tons, 6 percent above 1987/88. Thailand's crop is forecast at 13.2 million tons (milled), and exports are expected to rebound from the 1987/88 weather-reduced low to 4 million tons. China, Australia, India, and Burma also expect larger harvests. World import demand in 1988/89 is forecast to rebound to 12.3 million tons, 19 percent above 1987/88. [James Cole (202) 786-1840 and Carolyn Whitton (202) 786-1826]

**For further information:** Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Peter Riley, world feed grains; James Cole, domestic feed grains; Tom Bickerton, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Bob Skinner, domestic cotton; Jim Schaub, domestic peanuts. World information (202) 786-1824; domestic (202) 786-1840.

## High-Value Crop Overview

### *Drought Dims Outlook for Dry Beans And Processed Vegetables*

Dry weather and above-normal temperatures during the spring and early summer cast uncertainty over nonirrigated fruit and vegetable production in the north central United States. The season's outcome depends on receiving adequate rainfall during the remainder of the summer. However, 30-90 day weather forecasts call for below-normal rainfall and above-average temperatures.

The drought's greatest impacts on fruit and vegetable crops are likely to be on dry edible beans, tart cherries, green peas, sweet corn, and snap beans for canning. Wisconsin and Minnesota produce about 50 percent of U.S. sweet corn and green peas, much of which is on nonirrigated acreage. Wisconsin produces about 40 percent of the U.S. snap bean output, about half of which is grown on nonirrigated acreage. Fresh vegetable production tends to be concentrated on irrigated land.

**Canned vegetables.**—Midwestern green pea production fell 50 percent below normal this year. Sweet corn and green beans are harvested later in the summer, and production depends on rainfall during the rest of the summer. Cannery reportedly expect Midwestern sweet corn and green bean production to come in at only 70-75 percent of planned, and carrot and beet production to end up 60-65 percent of planned. Cannery raised pea, sweet corn, and snap bean prices 10-20 percent during June because of anticipated production shortfalls.

Most of the corn, peas, and beans grown in Wisconsin and Minnesota are for canning. Vegetables for freezing are concentrated in the Pacific Northwest, where water for irrigation generally has been adequate for vegetable production this summer.

**Potatoes.**—Hot, dry weather in June hurt development of potatoes across the north central States, reducing stands and stressing potato plants.

USDA estimates potato acreage for 1988 at 1.27 million acres, 2 percent less than last year. The area for fall harvest is es-

timated at 1.06 million acres, 3 percent below last season. The large 1987 fall crop resulted in generally lower prices for the 1987/88 marketing year, causing farmers to cut acreage this season.

**Sweetpotatoes.**—Growers planted 93,900 acres of sweetpotatoes for 1988, down 3 percent from last year and the year before. The biggest change occurred in Louisiana, where acreage fell nearly 11 percent from 1987. Planted area is 4 percent below March intentions because dry soils delayed planting.

**Dry edible beans.**—The drought appears to have contributed to a 36-percent cut in Michigan's dry bean acreage this year. Most of Michigan's dry beans are grown on nonirrigated land. Dry weather set back schedules in Michigan and much of the acreage was planted late. Late planting increases the likelihood of frost damage and of harvesting problems due to wet fall weather. Growers shifted some dry bean acreage to soybeans, hoping for higher returns.

USDA's July crop estimates place Michigan's dry bean planted acreage at 300,000 acres. Michigan grows mainly navy beans, accounting for 60 percent of the 1987 navy bean harvest. Navy bean prices rose nearly 40 percent during the third week of June, because of anticipated drought-reduced yields and smaller supplies.

The July estimate of area for harvest for all types of dry beans stands at 1.51 million acres, down 13 percent from last year and 6 percent below 1986. In addition to the drop in Michigan, large acreage reductions were reported for California, Colorado, Idaho, and Nebraska. North Dakota reported 21,000 more acres for harvest than in 1987.

**Apples.**—Production is forecast at 8.07 billion pounds this season, down 23 percent from last year. All regions expect decreased production. In Washington, the stress on trees from last year's record crop and this spring's varied bloom and set contributed to lowered output prospects. Trees in New York's Lake Ontario region suffered some winter damage. Michigan's apple crop is expected to be smaller than last year because of spring freezes and the drought.

**Grapes.**—The California all-grape crop forecast stands at 4.70 million tons, 1 percent above last season. Raisin-type

grape production is forecast at 2.15 million tons, 2 percent lower than last year but 5 percent above 1986. Some growers have had their water allocations scaled back, and many have switched to costly pumping of well water.

The production forecast for table-type grapes in California is 600,000 tons, 18 percent above last year but 3 percent below 1986. Tight water supplies have not affected table grape production, and growers are reporting heavy yields.

California's wine grape production is forecast at 1.95 million tons, the same as last year. The drought has had little effect on the crop as yet. Some acreage may undergo stress as irrigation water runs out.

**Tart cherries.**—Production is forecast at 207 million pounds this year, down 42 percent from 1987 and 8 percent below 1986. Production in Michigan, the largest cherry State, was off 43 percent. Severe spring freezes, drought, and fruit drop during June combined to reduce the crop. New York's output is forecast down 34 percent from 1987.

**Tobacco.**—The U.S. all-tobacco area for harvest in 1988 is expected to total 624,000 acres, up 6 percent from last year. Both flue-cured and burley recorded increases, reflecting higher effective quotas for 1988. Moisture has been adequate for plant growth in much of the flue-cured belt, and yield prospects look good. Since dryer conditions are continuing in the burley area, yields likely will be reduced.

**Sugarbeets.**—The July Crop Production report estimated planted sugarbeet area for 1988 at 1.32 million acres, up 4 percent from last season. Acreage was up in all key growing areas except California. However, dry weather resulted in poor germination, requiring growers to replant some acreage several times. According to industry sources, more than 250,000 acres, mostly in the Red River Valley, had to be replanted. In some cases, farmers may have switched to other crops having a shorter growing season or requiring less soil moisture for seed germination.

USDA analysts place beet sugar production substantially below last year's near-

record crop. Cane sugar production likely will equal or exceed last year's output. Acreage for harvest rose 2.1 percent, and timely rainfall coupled with good growing conditions are likely to result in normal or higher yields.

The uncertain domestic beet sugar production outlook for 1988/89 has helped spur a price upturn. U.S. raw sugar prices stood at 23.6 cents a pound (Contract No. 14) in mid-July, up from 22.0 cents in the first quarter of 1988 and 21.7 cents during the last quarter of 1987. [Glenn Zepp (202) 786-1883]

For further information contact: Ben Huang, fruit; Shannon Hamm, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco. All are at (202) 786-1886.

### Upcoming Releases from the Agricultural Statistics Board

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the September Agricultural Outlook comes off press.

#### August

- 1 Egg Products
- Poultry Slaughter
- 4 Dairy Products
- 5 Celery
- 10 Vegetables
- 11 Crop Production
- 12 Turkey Hatchery
- Farm Labor
- 15 Cattle on Feed
- 16 Milk Production
- 17 Sugar Market Statistics
- 19 Mushrooms
- Livestock Slaughter
- Catfish
- 22 Filbert Production
- (Tent.)
- Cold Storage
- 23 Cranberries
- 24 Eggs, Chickens, & Turkeys
- 29 Peanut Stocks & Processing
- 30 Rice Stocks
- Agricultural Prices



## Commodity Spotlights

### Cotton Marketing Loans: How Are They Working?

Mandatory implementation of marketing loans for the 1986-90 crops of upland cotton was provided for by the Food Security Act of 1985. Under a marketing loan, producers may repay their non-recourse loan at less than the loan rate if world prices, adjusted to the United States, are below the loan rate.

For the 1986 crop, the loan repayment rate was 80 percent of the loan rate, free of all interest and storage charges during the initial 10 months of the loan (Plan A). In addition, if the adjusted world price (AWP) fell below the loan repayment rate, farmers who redeemed their loans would receive cotton-specific marketing certificates based on the difference between the loan repayment rate and the AWP.

For the 1987 and 1988 crops, the loan repayment rate is either the loan rate or the AWP, whichever is lower (Plan B). The AWP for upland cotton is the weekly average of the five lowest quotes in the North European market (known as the A index), adjusted to U.S. location and quality.

Prior to implementation of the marketing loan on August 1, 1986, the Memphis territory spot price for upland cotton was 30

cents a pound higher than the world price (A index). With marketing loans and cotton-specific certificates, 1986-crop loans could be repaid at world prices, allowing more stocks to enter the market.

Export sales rose, reflecting these price reductions. U.S. exports of upland cotton during the 1986/87 marketing year were about 6.6 million bales, a 254-percent increase over 1985/86. The U.S. share of the world cotton trade rebounded from only 9.6 percent in 1985/86 to 25.8 percent in 1986/87.

Ending stocks of upland cotton fell from almost 9.3 million bales in 1985/86 to 4.9 million in 1986/87. Of the 6.2 million bales of 1986-crop cotton placed under loan, 97 percent have been redeemed.

Following initial price declines after the marketing loan was implemented, cotton prices began rising, reflecting production shortfalls in China in fall 1986 and Brazil the following spring, as well as strong demand for cotton textiles.

The AWP rose to 75 cents by late August 1987 and then declined as a result of prospects for large production in 1987/88. As the AWP dropped nearer the loan rate, producers placed more 1987-crop cotton under loan, and they have had little incentive to redeem these loans. As of June 29, 1988, only 38 percent of the 5.3 million bales of 1987-crop cotton placed under loan had been redeemed.

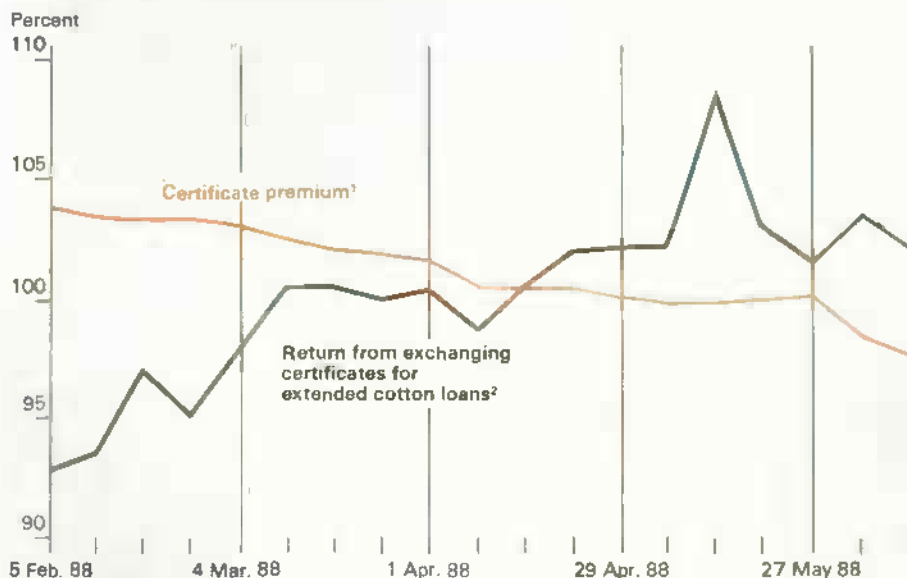
### Why Have So Few Cotton Loans Been Redeemed?

U.S. prices currently reflect the cost of redeeming cotton loans. For cash redemptions, this cost includes the loan

Cash and Certificate Redemption Compared

	Cash redemption	Certificate redemption
Cents per pound		
Loan rate/		
AWP	52.25	55.32
Interest	2.35	0
Storage	2.80	2.80
Equity	5.70	5.70
<b>Total</b>	<b>63.10</b>	<b>63.82</b>
Spot price	62.32	62.32
Difference	-0.78	-1.50

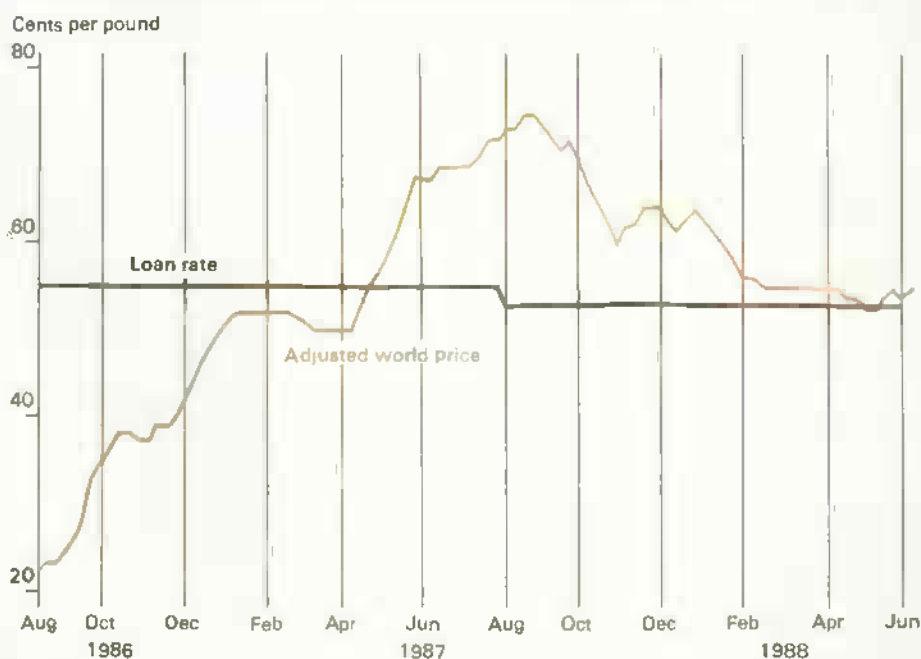
### Certificate Exchanges for Cotton Loans Become Profitable as Certificate Premiums Fall



<sup>1</sup>Certificate value as a percentage of par value.

<sup>2</sup>Spot price divided by (AWP+equity) expressed as a percentage.

### Adjusted World Price of Cotton Exceeds Loan Rate Since May 1987



rate, plus interest and storage costs, plus loan equity. (Loan equity is the amount buyers pay farmers to entice them to redeem loans, or to sell their right to redeem loans.) For certificate redemptions, the cost reflects the exchange rate (the AWP) plus storage costs and loan equity.

Consider the following example of a producer who placed 1987-crop cotton under loan in November 1987. To repay

the loan with cash would include the cost of the loan rate, 52.25 cents, plus 8 months' storage and interest costs, 5.15 cents. Loan equities are trading at 5.70 cents a pound (\$25-\$30 a 480-pound bale). Including the loan equities, the total cost of cash repayment is 63.10 cents.

To repay the loan by exchanging certificates for cotton loan collateral would include cost of the AWP, 55.32 cents; plus

storage costs, 2.80 cents; and loan equity 5.70 cents. On June 10, 1988, the AWP was 55.32 cents per pound. In this example, total costs of redeeming loans with certificates are 63.82 cents. The higher the AWP relative to the loan rate, the more cash redemption is favored over certificate redemption.

However, the eight-month spot price for U.S. cotton on June 10 was 62.32 cents, implying a 1-2 cent loss if cotton loans were redeemed with either cash or certificates. This margin may explain why almost 65 percent of the 1987-crop cotton placed under loan remains unredeemed.

The loan redemption price, including equity, is nearly 8 cents above competitor prices as measured by the AWP. This raises concerns about the competitiveness of U.S. cotton in world markets.

Certificate redemptions may be high as cotton loans enter extended loan status. Cotton loans mature in 10 months, but farmers may ask for an 8-month extension whenever the average spot market price in the 9th month is less than 130 percent of the average spot price for the preceding 36 months.

If the loan is extended for another 8 months, the certificate redemption cost is simply the AWP plus loan equity, free from all carrying charges. In the example above, however, storage accrues on the cotton from month 11 through month 18. The cost of certificate redemption would be 61.02 cents. Exchanging the loan with certificates and selling the cotton at the spot price of 62.32 cents would net 1.30 cents per pound.

Expressed differently, for every certificate dollar exchanged for cotton loan collateral, the certificate holder would net almost \$1.02 (spot/(AWP+equity)). With certificate premiums currently trading under par value, certificate exchanges for cotton could account for an increased share of total exchanges in future months.

Since mid-June, the difference between the spot price and the AWP has narrowed to less than the cost of equity. However, the use of generic certificates over cash to redeem cotton loans remains an attractive option to holders of 1987-crop equities whenever the AWP falls below loan rate plus interest.



The longer term competitiveness of U.S. cotton remains a concern to industry and Government. USDA is currently preparing regulations to modify the way the AWP is calculated.

Among the provisions are changes from a 156-week moving average of transportation costs to a 52-week moving average, changes in the coarse count adjustments for staple length and quality, and changes allowing redemption of loans under the same premium and discount schedule in effect when the cotton went under loan. With these changes, the AWP could more accurately reflect world prices, thereby increasing the competitiveness of U.S. cotton. *[Joe Glauber (202) 786-1840]*

### Horticultural Imports Expand From Caribbean

The Caribbean Basin Economic Recovery Act of 1983 gave 27 countries in the Caribbean Basin duty-free access to U.S. markets for 12 years beginning in 1984. This status improved the competitive position of all but a few products that were specifically excluded: selected textiles, leather goods, canned tuna, crude and refined petroleum products, and watch parts.

Following the passage of the act, a wave of optimism led to searches for new economic opportunities. Producers sought horticultural products with growth potential in U.S. markets. A review of U.S. import data for about 75 horticultural products covering the first 4 years of the act suggests the results are mixed.

#### U.S. Horticultural Imports Rise

U.S. imports of horticultural products from the Caribbean Basin Initiative (CBI) countries rose from about \$459 million in 1983 to \$666 million in 1987, or 45 percent. When bananas, beer, and ale are excluded, imports of the remaining products more than doubled, going from \$91.1 to \$191.2 million.

Fresh pineapples were about 12 percent of the \$191.2 million imports. Other commodities were frozen concentrated orange juice (5.1 percent); other melons, mostly honeydews (7.1); cantaloupes (4.3); mangos (2.5); and frozen broccoli (4.8). Seventy-five products account for about half of the \$191.2 million. Products not among the 75, but still important CBI exports to the United States,

include live plants, peas, yams, sweet potatoes, and dasheens.

#### Pineapples and Melons Are Strong Gainers

Nine products from the CBI-designated countries showed strong gains from 1983 to 1987. Pineapples, cantaloupes, and other melons (mostly honeydews) increased more than 6,000 metric tons per year over the 5-year period. The CBI share of U.S. pineapple imports increased from 57 to 96 percent, other melons from 24 to 45 percent, and cantaloupes from 7 to 21 percent.

Costa Rica and Honduras were the principal sources of fresh pineapples, while Guatemala, the Dominican Republic, and Panama were the big gainers for cantaloupe and honeydew exports. Also showing strong gains were frozen broccoli, fresh celery, onions, and roses (largely from Guatemala), frozen concentrated orange juice (mostly from Belize), and fresh okra from the Dominican Republic.

#### Watermelons and Mangos Among Medium Gainers

U.S. imports of watermelons, frozen strawberries, and fresh strawberries from Guatemala, grapefruit from the Bahamas, mangos from Haiti, and coconut meat from the Dominican Republic also increased, but with much less persistence and strength. Except for grapefruit, the imported shares of U.S. consumption of these commodities were small and did not change much from 1983 to 1987.

However, the CBI share of U.S. grapefruit imports rose from 10 to 93 percent of consumption. The Bahamas now account for 99 percent of the CBI share of U.S. grapefruit imports. Nevertheless, the United States imports less than 1 percent of its grapefruit supply in any given year.

#### Some Commodities Show Weak Gains

U.S. imports of seven commodities from CBI countries showed weak, intermittent

Major Changes in U.S. Imports from Caribbean Basin Initiative (CBI) Nations, 1983-87

Change and commodity	Average yearly increase Metric tons	CBI share of total U.S. imports		1987 share of U.S. imports from leading CBI exporters	
		1983	1987	Percent	
<b>Strong increases:</b>					
Pineapples	10,562	57	96	45	Costa Rica
Other melons	7,101	24	45	29	Guatemala
Cantaloupes	6,186	7	21	47	Honduras
Frozen broccoli	2,060	17	15	96	Guatemala
FCOJ	1/ 1,587	2/	2	78	Belize
Celery	851	0	29	99	Guatemala
Okra	328	2	8	50	Dom. Rep.
Onions	205	1	1	90	Guatemala
Roses	3/ 3,184	6	8	63	Guatemala
<b>Medium strong increase:</b>					
Watermelons	1,970	2/	4	45	Guatemala
Grapefruit	653	10	93	99	Bahamas
Mangos	375	18	17	97	Haiti
Coconut meat	470	4	7	88	Dom. Rep.
Frozen strawberries	269	2/	3	97	Guatemala
Strawberries	155	1	5	53	Guatemala
<b>Weak increase:</b>					
Tomatoes	1,782	2/	1	99	Dom. Rep.
Pineapple juice, concentrate	4/ 372	6	6	95	Honduras
Frozen peas	56	5	5	83	Guatemala
Squash	306	2/	3	30	Panama
Lemons	602	1	16	100	Bahamas
Garlic	31	2/	1	96	Guatemala
Peppers	298	4	3	78	Dom. Rep.
<b>Decrease:</b>					
Green beans	-139	6	1	58	Dom. Rep.
Cucumbers	-870	5	2	34	Jamaica
Eggplant	-60	2	1	39	Dom. Rep.
Frozen cauliflower	-190	15	3	100	Guatemala
Frozen okra	-321	94	99	44	El Salvador

1/ = 65 bria. 2/ = Less than 0.5 percent. 3/ = 1,000 roses. 4/ = 60 bria.

gains. Tomatoes increased almost 1,800 metric tons annually, but were only about 1 percent of total U.S. tomato imports in 1987. Nearly all tomato imports from CBI countries were from the Dominican Republic.

Lemon imports from the Bahamas grew about 600 metric tons annually and accounted for 16 percent of total U.S. lemon imports in 1987, up from only 1 percent in 1983. Other commodities showing weak gains were pineapple juice concentrate, frozen peas, squash, garlic, and peppers.

### **Green Beans and Cucumbers Among the Losers**

Imports from CBI countries dropped for green beans, cucumbers, eggplant, frozen cauliflower, and frozen okra. Except for green beans and frozen cauliflower, the decline was slight in this group. U.S. imports of frozen okra have remained stable since 1983, but a decline in imports from Mexico resulted in a rise in the CBI countries' share from 94 to 99 percent.

### **Results Are Mixed**

Duty-free status does not ensure success for CBI products in U.S. markets. Strong competition exists from Mexico for many fresh vegetables, and from Chile and other Southern Hemisphere countries for fresh fruits and juices. Competing with other regions by delivering fresh, high-quality fruits and vegetables to U.S. markets involves developing a closely coordinated production, processing, transportation, and distribution network.

It takes time and relatively large investments to plan, develop, and finance new ventures in regions such as the Caribbean, where social, political, and geographic handicaps, as well as years of colonial neglect, have hindered the development of dynamic and self-sustaining market economies.

Growth in the export capability of the CBI countries has begun and likely will continue. Congress has already hinted it might extend the CBI beyond the first 12-year period to provide a longer planning horizon and investment recovery period.  
*[Boyd Buxton (202) 786-1885 and  
Richard Brown (202) 786-1680]*



## **Farm Finance**

### **Cash Income Stable, But Inventories Down**

Net farm income, a production-based measure that adjusts for inventory changes, is forecast at \$40-\$45 billion in calendar 1988. This is down from \$46 billion in 1987, mostly because of estimated drought-related shortfalls in production and the expected subsequent drawdown in inventories.

Net cash income, which does not include inventory change, is projected at \$53-\$59 billion, about equal to last year's \$56 billion.

### **Why Stable Cash Income In Drought Year?**

Demand for "necessary" commodities such as food and feed is such that a reduction in output is usually accompanied by a relatively large increase in price. For example, the estimated 29-percent decrease in corn production is expected to raise prices by more than 30 percent. Price gains that more than offset production decreases and imply rising crop values are also projected for wheat and soybeans.

Cash receipts in 1988 include marketings from parts of this year's and past years' crops. For example, more than 20 percent of the 1987/88 corn crop may be sold at higher prices than a year earlier,

adding to receipts in the 1988 calendar year. Prices had begun to rise before the prospect of a major drought this year was clear, and they have risen sharply since.

### **Much Lower Government Payments On 1988/89 Crops**

Direct Government payments to crop producers will be lower for this year's crop, but the reduction will affect mainly 1989 rather than 1988 income. Deficiency payments are expected to drop sharply for the 1988/89 crop as season-average prices exceed loan rates for most major crops.

However, about three-fourths of total direct payments received by farmers in 1988 will be unaffected by the drought. Most payments received in 1988 either apply to 1987/1988 crops or are unrelated to production, such as the Conservation Reserve Program and the Paid Land Diversion program. Payments for disaster aid will be higher; how much higher depends on legislation under consideration.

Payments affecting 1988 income include the Findley payment for feed grains (October) based on the 1987/88 season-average price and also include the 1988 food grain deficiency payment (December). The latter may be reduced by more than 75 percent because of higher wheat prices. The feed grain deficiency payment for the 1988/89 crop will not be determined until early 1989.

### **Higher Feed Costs For Livestock Producers**

Higher feed costs and deteriorated pasture and range conditions are leading to slightly heavier culling of breeding herds, thereby raising livestock slaughter and lowering prices in the latter half of 1988.

With price declines exceeding production increases, receipts to livestock producers may fall in the second half and feed costs will be higher. Even so, with strong prices the first half of this year, 1988 livestock receipts may about equal those in 1987.

## History Hints at Effect of Drought on Farm Income

By early July the 1988 drought had lowered projected corn production by 29 percent and soybean production by 13 percent, about as much as the full impact of the severe 1983 drought. A comparison of the current drought situation with those in 1980 and 1983 provides insights into likely impacts on 1988 farm income:

- Crop receipts can increase in drought years. As with the 1980 drought, sharp price increases likely will more than offset decreased quantities of crops sold. Crop receipts in 1988 are projected to be \$7-\$11 billion larger than in 1987. Much of the rise is because past crops held over in farmers' granaries are marketed at 1988 prices.
- Crop farmers receiving adequate rainfall or using irrigation likely will realize higher 1988 incomes than if the drought had not occurred. Farmers selling inventory from granaries filled from past years' production will benefit from recent sharp gains in prices of corn, wheat, and soybeans. The financial gains of such farmers could partially offset losses of others.

### Cash Income in 1980, 1983, and 1988 Droughts

	Year before drought	Drought year	Year before drought	Drought and PIK year 1/	Year before drought	Drought year 2/
	1979	1980	1982	1983	1987	1988
\$ billion						
Income						
Net cash income	33	34	38	37	56	53-59
Net farm income 3/	27	16	24	13	46	40-45
Key components of income						
Crop receipts	62	72	72	67	61	68-72
Direct Government payments	1	1	4	9	17	10-14

1/ The Payment-in-Kind program, unrelated to the drought, idled 78 million acres of production to reduce stockpiles of crops that had increased rapidly in 1981-82. 2/ Projected. 3/ The major difference between net cash income and net farm income is that net farm income reflects a decrease in assets due to selling crops held in inventory at the beginning of the drought year. Both measures reflect the sale of carryover stocks in cash receipts during the drought years.

- The incomes of most corn, soybean, and spring wheat producers with sharp reductions in yields could plummet in 1988. Production shortfalls underlie the projected 1988 decline in net farm income (the measure of farm income that includes inventory changes).
- Profitability of livestock operations is reduced by higher feed costs in drought years.
- Cash income is little changed from 1987. High Government payments will help maintain 1988 cash income as they did in 1983. The drought could reduce Government deficiency payments by as much as \$2 billion below that previously forecast for 1988. There may be a much greater reduction in calendar 1989 deficiency payments for crops produced in 1988.

## Wide Disparities In Farmers' Incomes

Although cash income to the farm sector may be about the same as a year earlier, its distribution among farmers will be much different than it would have been with normal weather. Farmers in areas less affected by the drought will benefit from higher prices. Farmers holding significant inventories of corn, soybeans, or wheat from the 1987/88 and earlier crops could benefit substantially from drought-induced price increases.

In contrast, farmers in areas heavily affected by the drought, particularly those farmers with little or no carryover from the previous crop, will experience a precipitous drop in cash income. Hog and beef producers will face higher feed costs and, at least initially, are likely to receive lower prices because of the drought. [Andy Bernat, Gregory Hanson, and Richard Kold (202) 786-1807]

## Farm Lenders Mending, But Long-Term Doubts Remain

Higher farm earnings, relatively steady interest rates, and accelerated farm debt repayment revitalized many farm lenders going into 1988. Most lenders probably will continue to improve in 1988, although drought-related problems will create difficulties for some (see next article). Except at the Farmers Home Administration (FmHA), farm loan delinquencies and loan losses are falling.

The longer term outlook for lenders is clouded. They face tighter interest margins, weak demand for farm loans, and massive regulatory changes. Farm income is becoming more unpredictable as farmers are buffeted by fluctuations in export markets and in the weather. Producers also face uncertainty with the approach of new Federal crop-support programs in 1991. And the profitability of farm lenders ultimately hinges on the profitability of farming.

## Changes in Credit Delivery System Are Unprecedented

During the mid-1980's, record farm loan losses and record farm bank failures, combined with the near insolvency of the Farm Credit System (FCS), prompted an unprecedented restructuring of the Nation's farm credit delivery system.

Direct Federal support for credit fell as the FmHA replaced many of its direct loans with loan guarantees, in accordance with the 1985 Food Security Act. The Agricultural Credit Act of 1987 provides the FCS with a \$4-billion line of credit, but requires many FCS institutions to merge with one another. The act also calls for two new secondary markets for farm loans.

Many of the recent changes are helping farmers solve their financial problems, but at the expense of lenders. FCS and

FmHA borrowers are now armed with new "borrower rights" provisions for protection against foreclosure. The States get Federal support for loan mediation programs that give stressed borrowers more power when negotiating with lenders.

The relatively new Chapter 12 of the Federal bankruptcy code also helps farmers going through hard times by allowing them to discharge debt without going out of business. But it hampers lenders in collecting delinquent loans.

So, lenders in good shape are more cautious about extending new farm credit. They compete to make loans to qualified borrowers while avoiding farmers who might pose higher risks.

### *Farm Debt Continues Down*

By the end of 1987, farm debt (excluding operator household debt) fell nearly 26 percent to \$143 billion, down from the \$192.7-billion peak in 1983. Farm debt is forecast to fall another 4 percent in 1988. Through last year, real estate debt declined from its 1983 peak by \$23.8 billion, or 22.7 percent, and nonreal estate debt declined \$25.9 billion, or 29.5 percent from its 1983 peak. Debt reduction and write-offs are broad-based among all lenders except FmHA.

Commercial banks are now the dominant farm lenders. At the end of 1987, the volume of farm loans held by commercial banks exceeded the FCS's farm loan portfolio for the first time in recent history. Farm loans from commercial banks and the FCS (excluding the FCS Banks for Cooperatives) totaled \$41 billion and \$39 billion, respectively. The FCS market share has steadily declined since 1981, when the FCS held \$61.5 billion in farm loans, compared with \$38.8 billion for commercial banks.

Commercial banks improved their market share relative to the FCS mainly through an expansion of farm real-estate-secured loans. Since 1984, the FCS's Federal Land Bank (FLB) loans fell by \$15.3 billion. During the same period, commercial bank real-estate-secured loans rose by \$3.7 billion.

The FLB's are still the largest real estate lender, with a real estate loan portfolio

over twice the size of that held by commercial banks. But most new loans secured by real estate at commercial banks are for the extension and recollateralization of short-term loans rather than for new land loans.

Although commercial banks dominate the nonreal estate loan market, their loan volume declined along with the loan volume at the FCS's Federal Intermediate Credit Banks/Production Credit Associations (FICB's/PCA's). The payday began in 1981 for PCA's and in 1985 for banks. Through the end of 1987, FICB/PCA loans fell by \$12.3 billion, and commercial banks' nonreal estate loans fell by \$5.7 billion.

Not only do commercial banks dominate the nonreal estate market, but they also increased their market share as the market contracted. In 1987, the FICB's/PCA's held 15 percent of total nonreal estate debt to the commercial banks' 45 percent. The comparable figures in 1981 were 25.5 and 37.3 percent.

### *Demand and Supply Both Contribute to Paydown*

Severe financial stress reduced farm debt both through restructuring troubled loans and through liquidation and bankruptcy. In addition, farmers not suffering from financial stress have apparently come to view debt with more caution in the 1980's. They have used current income or bank deposits to reduce or eliminate some of their debts.

The overall paydown in the farm loan portfolio appears to have been driven, initially, more by drops in farmer demand than by drops in lender supply. Farmers may decide to hold less debt for many reasons—lower input prices and use, cutbacks in crop acreage required by Government programs, advance deficiency payments, and sagging land values.

However, recent reductions in farm debt appear to be driven more by lender supply. Agricultural lenders initially reacted to the farm sector's financial problems in the 1980's by tightening credit standards. The decade's farm financial problems also led to numerous Federal and State actions to help both lenders and farm borrowers. The goal was to retard or prevent the exodus of farmers from the land.

Lenders are now reacting to the amalgam of policies and problems by further tightening farm credit standards and by limiting farm loans to the best risks. Some of the new developments to which lenders are reacting include: Chapter 12 bankruptcy, nonassignment of generic commodity certificates, lender liability lawsuits, farm homestead exemption and redemption rights, mandatory mediation, and mandated loan restructuring, and other borrower rights.

Lenders say they have plenty of credit available for "qualified borrowers," but the borrowers must be very qualified. Although agricultural lenders have plenty of lendable funds, they have trouble finding what they consider creditworthy borrowers. The average loan-to-deposit ratio at agricultural banks fell from 68 percent in June 1979 to 52 percent in December 1987, so the banks have ample funds.

Total farm debt is not expected to grow soon. How can farm real estate debt grow when most analysts expect farmland values to follow or possibly fall below the inflation rate? Prospects for growth in nonreal estate debt are only somewhat better. Given the current mix of advance deficiency payments and other future farm-sector financial uncertainties, USDA does not foresee a rapid expansion in nonreal estate debt.

Yet intermediate-term credit may expand. Farmers have been using up capital stock in the 1980's. Farm equipment sales have been falling for several years, and aging equipment will have to be replaced soon. Recent figures from the Farm and Industrial Equipment Institute showed that sales of tractors, combines, and forage harvesters were up, but this rise may have been more the result of manufacturers' promotions than of a surge in demand.

Other forces could augment credit supplies. These forces arise from Federal credit policies meant to aid financially distressed farm lenders. Policies that could lead to abnormally rapid growth in farm credit include the repayment provisions of the FCS rescue package, the forbearance program run by the commercial bank regulators that allows weak farm banks to remain open, the new federally supported secondary market for

Loan Delinquencies and Charge-Offs for Institutional Farm Lenders

Lender and date	Delinquent loans 1/	Percentage of portfolio 2/	Net loan charge-offs	Percentage of portfolio 3/
	\$ million	Percent	\$ million	Percent
<b>FCS 4/</b>				
12/31/84	5,689	8.7	428	0.5
12/31/85	6,465	9.7	1,105	1.4
12/31/86	8,137	14.9	1,321	2.0
12/31/87	5,749	11.6	488	0.9
3/31/88	5,570	10.6	47	0.1
<b>FmHA 5/</b>				
6/30/84	5,937	21.3	117	0.5
6/30/85	6,385	23.0	234	0.9
6/30/86	6,835	24.6	379	1.4
6/30/87	7,005	26.7	1,119	4.1
3/31/88	9,211 6/	36.5	NA	NA
<b>Commercial banks 7/</b>				
12/31/84	2,100	5.2	900	2.3
12/31/85	2,600	7.3	1,300	3.3
12/31/86	2,200	7.0	1,200	3.4
12/31/87	1,509	5.2	535	1.7
3/31/88	1,459	5.2	28	0.1
<b>Insurance companies</b>				
12/31/84	1,167	9.6	NA	NA
12/31/85	1,717	15.1	NA	NA
12/31/86	1,783	17.0	NA	NA
12/31/87	1,330	14.3	NA	NA
3/31/88	1,527	16.6	NA	NA

NA = Not available.

1/ For commercial banks and FCS, delinquent loans are those past due 90 days or more and still accruing interest plus loans in nonaccrual status. For FmHA, delinquent loans include only principal loan payments more than 15 days past due. Including loan balances such as FCS and commercial banks would substantially increase delinquencies. For insurance companies, delinquent loans are those loans past due 90 days or more and loans in the process of foreclosure. 2/ As a percentage of all such loans held at the end of the period. 3/ As a percentage of all such loans held at the beginning of the period. 4/ Includes data for all Farm Credit Banks. 5/ Includes only data for direct Farmer Loan Programs. Net loan charge-offs are for fiscal years ending September 30. 6/ Increase from previous period reflects seasonal fluctuation and changes in reporting procedures. 7/ Data are estimates of national delinquencies and charge-offs of farm nonreal estate loans held by commercial banks.

farm real estate loans, and public-sector initiatives for lenders to restructure delinquent farm loans.

Facets of these credit policies give the owners and managers of weak, federally supported financial institutions both the incentives and the means to adopt high-risk, potentially high-return lending strategies.

**Developments Vary By Type of Lender**

**Commercial banks.**—The quality of agricultural loans held by commercial banks continues to improve. At the end

of 1987, \$1.5 billion of farm nonreal estate loans were reported as delinquent, down almost \$700 million from the end of 1986. And, commercial banks are aggressively restructuring farm loans; the banks reported farm loans valued at \$530 million as restructured on terms more favorable to farm borrowers in 1987.

Commercial banks sustained farm non-real estate loan losses totaling \$535 million for 1987, down by more than half from 1986. Losses for 1987 do not include the \$18 million deferred under the new loss-deferral provisions of the 1987 Banking Act.

Commercial banks specializing in farm finance (banks with above-average farm loan concentrations) rebounded and markedly outperformed the commercial banking industry in 1987. Farm banks' rate of return on equity (net income divided by equity, as a percentage) rose from 5.1 percent in 1986 to 7.6 last year. That compares with the whole industry's return of 9.8 percent in 1986 and 1.9 percent last year.

Yet the farm bank rebound is uneven; some 40-60 farm banks are forecast by ERS to fail this year. And about 500 banks on the Federal Deposit Insurance Corporation's problem list have more than 25 percent of their loans to farmers. Many farm banks risking failure this year are in the Southwest, where nonfarm banks are reeling from the gyrations in oil prices.

**Farm Credit System.**—The beleaguered FCS may turn the corner in 1988. The Agricultural Credit Act of 1987 boosted borrowers' and investors' confidence. Borrower flight has been cut. Loan volume could bottom out in 1988 and begin to rise in 1989.

The FCS, including Banks for Cooperatives, had \$49.5 billion in net loan volume (subtracting money set aside for loan write-downs) at the end of 1987, compared with \$54.6 billion a year earlier—a 9.3-percent decline. However, net loan volume declined only \$874 million in the last quarter of 1987, compared with a \$3.6-billion paydown in the same quarter of 1986. And loan volume rose slightly in the first quarter of 1988 because of higher loan demand facing the Banks for Cooperatives.

Loan rates offered by FCS institutions, particularly by the PCA's, are becoming competitive with other lenders. Some agricultural bankers are claiming that the "new" federally recapitalized FCS is undercutting bank rates in certain locales, in a predatory fashion, to regain business.

The FCS earned \$17 million in 1987, marking a sharp turnaround; it had lost \$1.9 billion in 1986 and \$2.7 billion in 1985. A \$684-million drop in money set aside to cover future losses and a \$221-million drop in the cost of holding foreclosed farms explain the income recovery in 1987. But net interest income fell throughout 1987 and the first quarter of 1988.

The FCS's nonperforming loans decreased \$2.4 billion between the end of 1986 and 1987, largely because of a more aggressive loan restructuring policy and a more stable farm economy. The FCS restructured over 33,000 loans worth \$4.5 billion during 1987, and \$1.4 billion in loans were restructured during the first quarter of 1988.

For 1987, loan losses at FCS institutions amounted to \$488 million, down about 63 percent from a year earlier. About \$47 million was charged off in the first quarter of 1988.

Despite the improved outlook, a complete turnaround in the financial health of the FCS will not come easily. Although the 1987 act provides the aid needed to keep the FCS solvent, it also requires organizational changes over the next 2 years. Many details of the reorganization remain to be worked out, and they may prove difficult to resolve.

Even though each FLB has merged with the FICB of its district, getting the real estate mortgage portfolio back in shape is the greatest hurdle facing the FCS. Three FCS-district FLB's have already asked for financial assistance under the 1987 act, and other Farm Credit Banks may follow.

The FCS continues to experience high operating costs and declining net interest income that will squeeze overall net income. Improving net income, particularly for FLB operations, will be a challenge in 1988.

**Farmers Home Administration.**—Unlike other lenders, the FmHA continues to struggle with farm loan problems accumulated during the 1980's. At the beginning of April, roughly 37 percent, or \$9.2 billion, of FmHA's \$25.2 billion in direct (insured) loans remain delinquent. Much of the delinquent debt has been past due for several years. FmHA faces the prospect of charging off billions of dollars on these loans during the coming years. In 1987, FmHA reported direct net charge-offs of some \$1.1 billion.

FmHA-initiated foreclosures against delinquent borrowers continue to be minimal. Both court injunctions against

FmHA foreclosure attempts and the passage of the Agricultural Credit Act of 1987 have stymied FmHA's attempts to collect delinquent loans. The new law requires FmHA to write off debt on delinquent loans if the write-offs are less costly to the Government than foreclosure.

FmHA provides credit assistance to farmers through direct loans and by guarantees of loans made by other lenders. As mandated by the 1985 Food Security Act, FmHA has shifted its lending emphasis from direct lending to loan guarantees. The policy shift has cut direct farm program lending authority in half in the past 2 years.

Ample funds exist for all loan guarantee programs, although funds for FmHA's direct Operating Loan Program could be exhausted by fiscal yearend. Moreover, the drought this year will increase the demand for limited Emergency Disaster loans.

**Life insurance companies.**—Delinquent farm loans (those 90 days past due and in the process of foreclosure) held by the major life insurance companies amounted to 14.3 percent of their farm loan volume outstanding on December 31, 1987, compared with 17.0 percent a year earlier. Life insurance company loan volume declined 2 percent from the end of 1986 to the end of 1987 and now stands at \$10 billion. It declined 16 percent over the 1982-87 period.

A number of the major life insurance companies lending to agriculture have left the market or are making only minor loans to existing customers as part of loan revisions, extensions, or restructuring. The lion's share of the new lending in 1987 was done by a few companies.

Farm mortgage lending by the life insurance companies has been significantly affected by recent protections for farm borrowers. Industry representatives say borrowers' rights have been greatly expanded and liberally interpreted, whereas lenders' rights have been narrowly interpreted and severely restricted by new laws.

Industry representatives believe the new laws cause time-consuming and unproductive delays. Many of them say that the shift has increased loan losses

and influenced decisions about how much their companies will lend to farmers. [Jerry Stam, Gregory Gajewski, Steven Koenig, and Merritt Hughes (202) 786-1892]

## Outlook for Banks in Drought-Stressed Counties

Agricultural commercial banks—those with above-average concentrations of farm loans—were rebounding as farmers entered this spring's planting season. Farm banks are better poised to deal with losses from agricultural loans than they were a few years ago. Their delinquent farm loans have been falling since mid-1986, and the drop in real farmland values has bottomed out in most parts of the country.

Nonetheless, 20 percent of the 543 agricultural banks forecast as vulnerable to fail at the beginning of 1988 are headquartered in the counties most affected by the drought. A bank's strength and performance in 1987, prior to the drought, indicate how well the bank can withstand drought-related losses. Agricultural bank failures could be pushed over this year's predrought forecast range of 40-60, but probably will not reach last year's post-Depression high of 75.

Although the drought is expected to have little effect on aggregate net farm income, some farmers in drought-stricken counties are suffering substantial losses. The farmers hit hardest will be unable to meet expenses this year, including repaying their local banks for farm credit used to put in this year's aborted crop. Banks in the parched counties will take unexpected hits unless Federal programs rescue the farmers.

The drought has been long and widespread. By June 11, it was most serious in North Central border States, West Coast States, some Corn Belt States, Southern States east of the Mississippi, and Maine (see maps on page 2). The drought has spread over more territory since then, particularly in the Corn Belt. The focus in this article is on the relation of farm banks to the drought at about the time that the weather became a major determinant of this year's farm output and income in many areas.

## Agricultural Banks and the Drought 1/

Area and condition 2/	Banks	Vulnerable banks 3/	Average assets	Farm loans	Return on equity 4/	Delinquent loans 5/
	Number		\$ 1,000		Percent	
U.S.						
No drought	3,472	433	33,054	35.7	7.6	3.0
Severe	649	66	35,414	32.7	8.0	2.6
Extreme	359	44	31,591	36.2	7.5	3.5
North Central						
No drought	548	73	31,125	36.6	7.6	3.0
Severe	285	45	31,446	35.6	5.6	3.4
Extreme	338	43	30,854	37.6	7.2	3.7
West						
No drought	20	7	27,667	35.4	3.6	3.6
Severe	14	7	50,956	25.7	2.5	3.9
Extreme	8	0	65,636	24.2	8.6	2.6
Corn Belt						
No drought	1,097	81	32,648	36.0	8.9	2.5
Severe	176	14	32,667	40.2	7.4	2.7
Extreme	--	--	--	--	--	--
Southeast						
No drought	300	19	45,400	25.4	9.5	1.9
Severe	174	0	43,444	25.8	11.4	1.6
Extreme	13	1	29,806	22.1	12.7	1.1

-- = not applicable.

1/ Agricultural banks are those reporting farm loans exceeding 15.6 percent of total loans on December 31, 1987, the unweighted-average farm loan concentration at all banks on that date. 2/ Areas are drought regions made up of those States containing contiguous drought-stricken counties, defined as counties with extreme or severe drought conditions according to the Palmer index on June 11, 1988 (see maps on page 2). 3/ Vulnerable banks are those with forecast failure probabilities during 1988 greater than 0.98 percent, the approximate average failure probability in 1986. Forecast failure probabilities are computed for each bank, and are based on bank-level financial data reported in mid-1987 and the dependence of the bank's local economy on the oil and gas sector in 1982. 4/ Return on equity is net income as a percentage of equity capital weighted by bank size for yearend 1987. 5/ Delinquent loans are loans past due 90 days or more still accruing interest plus loans in nonaccrual status as a percentage of total loans weighted by bank size on December 31, 1987. Average assets and percentage of farm loans are as of yearend 1987.

### National View Mixed

As of June 11, 782 counties were identified as drought-stricken. Over 20 percent of the Nation's 13,505 commercial banks are headquartered in these counties. So are 22 percent of the 4,480 agricultural banks. As the drought spread, more banks found themselves in drought-stricken counties. Most of the drought-related bank losses likely will be in the 1,000 or so agricultural banks in counties experiencing severe or extreme drought conditions.

Agricultural banks in counties experiencing severe, but not extreme, drought entered the spring planting season in better condition than farm banks in counties experiencing moderate drought or normal rainfall. These 650 or so severe-drought agricultural banks had a higher return on equity and a lower proportion of delinquent loans and restructured farm loans.

But the comparison is clouded by the relatively poor performance of farm banks in the energy belt—Texas, Oklahoma, Louisiana, Colorado, and Kansas—where the farm bank rebound has been anemic because of depressed, oil-related local economies. These States have generally received enough rainfall to ward off severe or extreme drought. Agricultural banks in the energy belt pull down the performance averages of the no-drought agricultural bank group for reasons unrelated to the drought.

The 350 or so agricultural banks in counties hit even harder by the weather and experiencing extreme drought conditions did less well last year than other agricultural banks. So, banks in the hardest hit counties are also the most vulnerable. The agricultural banks in the extreme-drought counties had a lower return on

equity and had higher proportions of delinquent loans and restructured farm loans. And, they are likely to take larger drought-related losses. To help themselves through, they happen to be slightly better capitalized than the agricultural banks in counties with severe but not extreme drought.

### Northern Banks Weaker; Western, Stronger

About 80 percent of the Nation's agricultural banks in drought counties with above-average probabilities of failure are in the northern drought region (see map on page 2). Agricultural banks in the region's drought counties had a lower return on equity and a higher proportion of delinquent loans than did banks in nearby counties not hit by the drought.

Agricultural banks in the drought-stricken counties of Iowa, Illinois, and Missouri were slightly worse off going into

1988 than agricultural banks in counties less affected by the drought in those States.

Agricultural banks in the western drought counties outperformed the rest of that region's agricultural banks. Because much of the region's agriculture uses irrigation, large drought-related loan losses are not expected. Nonetheless, a third of the 42 agricultural banks in California, Oregon, and Washington have an above-average probability of failure this year.

#### **Banks in Southeast Drought Area Are Stronger**

Agricultural banks in the drought region stretching from Ohio to the Gulf States (see map on page 2) markedly outperformed agricultural banks elsewhere in 1987. Agricultural banks in these drought counties were among the top performers in 1987, outpacing other groups of agricultural banks. In addition to having the highest return on equity and the lowest concentration of delinquent loans, agricultural banks in these drought counties are well-capitalized.

Even though Texas and Oklahoma have been largely spared from the worst of this year's drought, over 17 percent of all agricultural banks forecast as vulnerable to failure this year are in these Southern Plains States. By pushing up feed costs, the drought has hurt the region's cattle producers. Lower cattle producers' incomes will worsen local agricultural banking conditions and may push more of the region's vulnerable farm banks into insolvency.

Because changes in agricultural banking conditions tend to lag changes in the farm economy, banks will not feel the full effects of this year's drought until 1989. By November, it should be clearer how agricultural banks will fare in 1989. (See "Farm Finance" in the May *Agricultural Outlook* for more on forecasting bank conditions and failures.) [Gregory Gajewski (202) 786-1893]



## World Agriculture & Trade

### Exports In 1988 Changed Little By Drought

U.S. agricultural exports in fiscal 1988 are still expected to reach last May's forecast of \$33.5 billion and 145.5 million tons, a \$5.6-billion and 16-million-ton increase from fiscal 1987. Exports in 1988 are primarily crops harvested during the 1987/88 crop year. The drought will affect next year's exports more than this year's.

An estimated 80 percent of the forecast volume, or 117 million tons, had already been shipped by the end of June. Wheat exports had reached about 83 percent of their forecast volume; corn had reached 78 percent; and soybean and cotton shipments had reached 85 percent.

Lower than expected exports after June would only slightly reduce fiscal 1988 totals, since July-September is typically the seasonal ebb for U.S. agricultural exports, particularly for the bulk crops—corn, wheat, and soybeans—threatened by the drought.

About half of fiscal 1988's forecast of a 26-percent gain in export value for grains, oilseeds, and cotton was expected to come from higher prices, even before the drought accelerated U.S. price increases. A drought-related decline in export volume during the last 3 months of

fiscal 1988 probably would be offset by price increases, supporting the value of exports and sustaining the agricultural trade surplus.

Drought-affected crops play only a small role in agricultural imports. With agricultural imports for fiscal 1988 forecast at \$21 billion, the farm trade surplus is expected to show a \$5.2-billion jump to \$12.5 billion, one of its strongest gains ever.

#### **Export Value Still Strong After Fiscal 1988**

The drought's impact on exports during fiscal 1989 will depend both on how much U.S. production drops and on how overseas competitors and consumers react to higher prices. Previous droughts in 1980 and 1983 provide useful indicators.

Price gains have generally more than offset yield and supply reductions in previous droughts. During crop year 1980/81, U.S. corn and soybean supplies fell 10 and 12 percent from the year before. However, export prices averaged 18 percent higher for corn and 16 percent higher for soybeans during fiscal 1980/81. Crop year 1983/84 corn and soybean supplies fell 29 and 19 percent, whereas export prices averaged 23 and 24 percent higher between fiscal 1983 and 1984.

The volume of corn exports fell by less than 4 percent following the 1980 and 1983 droughts, while soybean exports fell by 17 percent after the 1980 drought and by 19 percent after the 1983 drought. But with higher prices, the value of U.S. agricultural exports rose after each drought year. Export value reached a record \$44 billion in fiscal 1981 and rose more than \$3 billion in 1984.

Although drought-reduced supplies and higher prices will help cut the U.S. share of world agricultural trade in 1988/89, there is no reason to believe that the drought will permanently constrain the U.S. share of the world market. Although U.S. agricultural exports began falling after fiscal 1981 and fell rapidly in the years following 1984, conditions were substantially different.

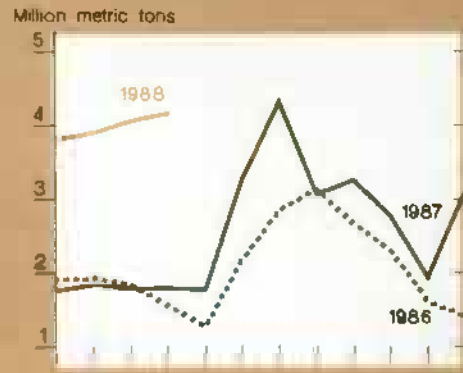


# U.S. Agricultural Trade Indicators

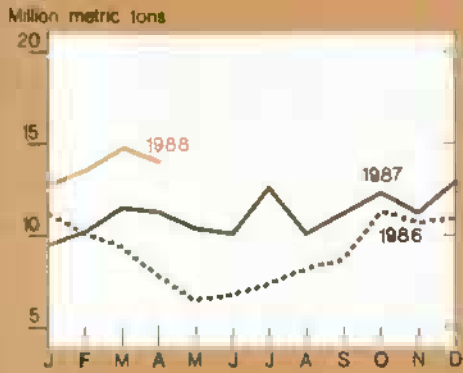
U.S. agricultural trade balance



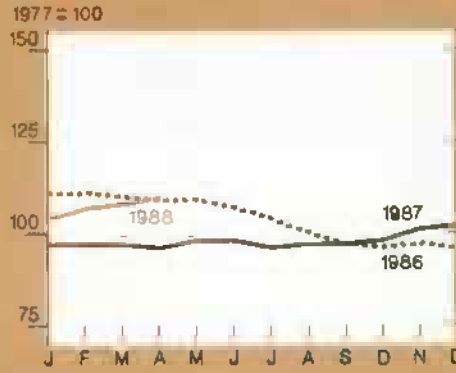
U.S. wheat exports



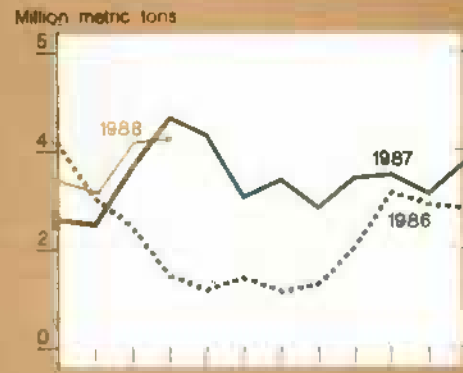
Export volume



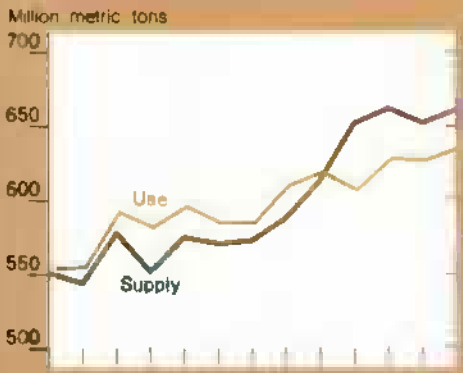
Index of export prices



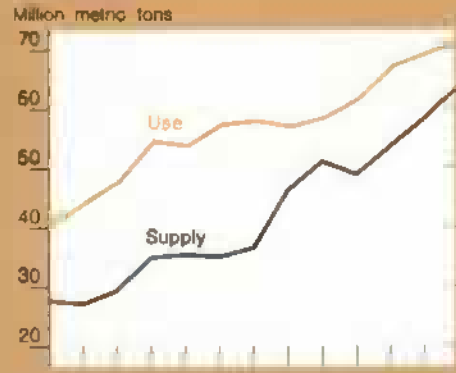
U.S. corn exports



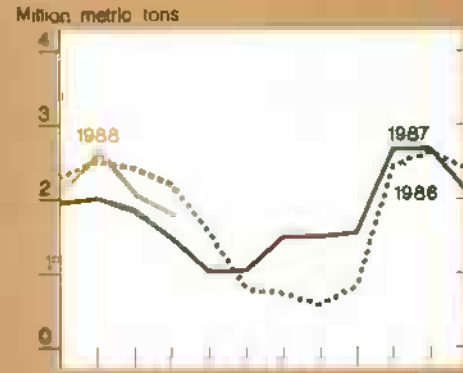
Foreign supply & use of coarse grains



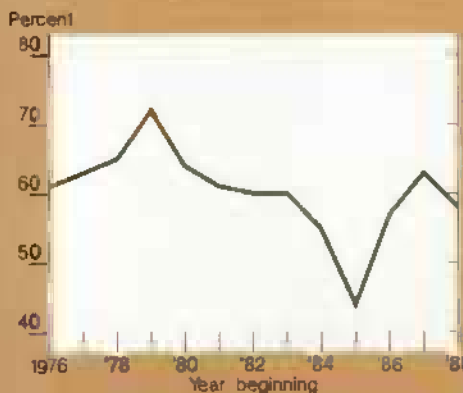
Foreign supply & use of soybeans



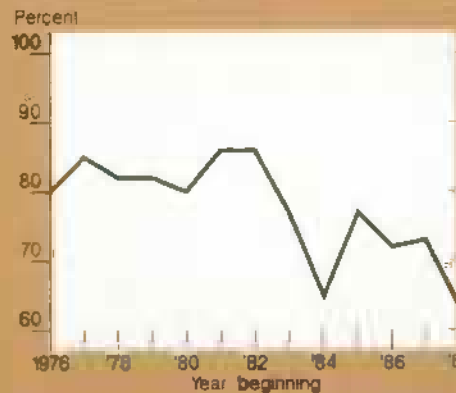
U.S. soybean exports



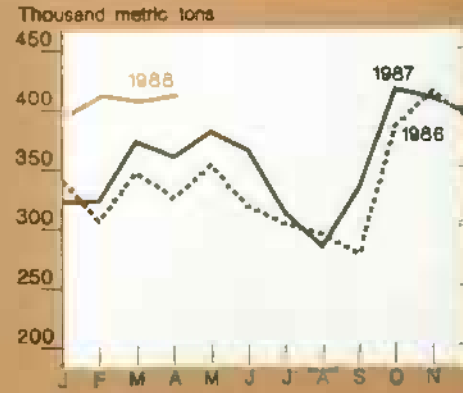
U.S. share of world coarse grains exports<sup>12</sup>



U.S. share of world soybean exports



U.S. fruit & vegetable exports<sup>3</sup>



<sup>1</sup>Excluding intra-EC trade. <sup>2</sup>October-September years

<sup>3</sup>Includes fruit juices.

The early 1980's were marked by global recession and severe contraction in the ability of developing countries to pay for imports. By 1984, world economic growth was recovering, but the dollar and U.S. price supports had risen for several years, boosting incentives for foreign production.

World economic growth is expected to remain near 3 percent in 1989. U.S. price supports are lower with the 1985 Food Security Act, and the dollar is unlikely to rebound from its 3-year decline. These conditions suggest a better post-drought outlook for U.S. agricultural exports after fiscal 1989 than existed after fiscal 1981 and 1984.

### *High-Value Exports Will Remain Strong*

Another factor sustaining U.S. agricultural exports in fiscal 1988 and beyond is the continued strength of high-value exports. High-value exports fell less than grain, oilseed, and cotton exports in the mid-1980's and recovered sooner, beginning in 1986. In 1988, horticultural exports are expected to rise \$550 million to a record \$3.7 billion, while exports of animal products are expected to rise \$600 million to a record \$5.6 billion. High-value exports are expected to reach \$15.3 billion in 1988, matching 1981's record high.

High-value exports are shipped mostly to developed countries, where prospects are good for U.S. exports. Financial constraints on imports are almost unheard of in developed countries, and their currencies have risen against the dollar in recent years. U.S. agricultural exports to the developed countries are expected to climb \$1.7 billion, to \$16.7 billion, the biggest surge since fiscal 1984.

U.S. agricultural exports to the European Community rose \$594 million during the first 8 months of fiscal 1988, largely because of high-value exports. For the year as a whole, exports to the EC are expected to grow 6 percent to \$7.2 billion, as moderate income and employment growth in the EC, and the inexpensive dollar, contribute to stronger exports of cotton, animal products, and horticultural products.

### *Exports to Japan and Canada To Rise*

The value of U.S. agricultural exports to Japan is expected to rise about \$1 billion

from fiscal 1987's \$5.6 billion. Increased sales of animal products, feed grains, and horticultural products, as well as higher prices for some commodities, will boost export value.

U.S. sales of animal products to Japan continued to be strong during the first three quarters of fiscal year 1988. U.S. beef exports should continue to expand, helped by strong Japanese demand for grain-fed beef. Japan's Ministry of Agriculture, Forestry, and Fisheries announced a provisional beef quota of 102,000 tons for April-September 1988.

The quota was 9,000 tons above the same period in 1987 and is well in excess of the 6,900-ton annual increases prescribed by the 1984 U.S.-Japanese agreement that expired in March. Expanded U.S. access to Japan's beef market was later assured by the completion of a U.S.-Japanese accord on beef and citrus trade (see "U.S.-Japanese Agricultural Trade Issues Are Clearing Up" in this issue). U.S. pork exports to Japan are also expected to rise.

U.S. fresh citrus exports to Japan, especially grapefruit, increased significantly during the first three quarters of fiscal 1988, and vegetable exports were vigorous as well. U.S. sales of these and other high-value and processed products will expand during the rest of fiscal 1988. Japan's economy is continuing its strong, demand-led economic expansion, and the trade imbalance is slowly improving.

The value of exports to Canada is expected to rise because of higher U.S. export prices, the continuing strength of the Canadian dollar against the U.S. dollar, and strong economic growth in Canada. Beef exports to Canada are expected to remain high, reflecting lower supplies in Canada. Among high-value crop exports, lettuce more than doubled during the first half of the year.

### *USSR and China Boost Wheat Imports*

Exports to the Soviet Union and China are up substantially in fiscal 1988, but high-value exports are playing little or no role in these markets. Exports to the Soviet Union are expected to rebound from 1987's \$445-million decline, rising about \$1 billion to \$1.7 billion. Soviet

contracts for U.S. wheat have already exceeded any previous fiscal October-September year, reaching 9 million tons as of late June.

A poor 1987 wheat crop in the Soviet Union, tight supplies of milling-quality wheat in competitor countries, and offers of about 9 million tons of Export Enhancement Program (EEP) wheat account for the sharp rise in U.S. sales to the USSR.

However, higher Soviet wheat production in 1988 is expected to decrease imports later in the year. A higher quality crop should reduce Soviet demand for milling-quality wheat, possibly shifting imports toward cheaper, feed-quality wheat as in previous years.

Soviet contracts for U.S. corn totaled 4.2 million tons by the beginning of July, about the same as during fiscal 1987, but near-record imports of U.S. oilseeds and products are expected. Soviet oilseed and meal imports from all sources may approach record volumes during 1987/88 as efforts to bolster the efficiency of livestock feeding received renewed emphasis (see "Soviet Livestock Sector Expanding" in this issue).

U.S. agricultural exports to China are forecast to about double, approaching \$500 million in fiscal 1988. Higher wheat shipments account for most of the increase. Wheat purchases will rise because of sufficient foreign exchange, attractive EEP offers, population growth, and per capita income growth. China's planners expect GNP to rise by 7.5 percent in 1988, with the gross value of agricultural output increasing by 4 percent and that of industrial output expanding by 8 percent. Incomes are expected to rise slightly faster than the general rise in prices, slightly boosting the level of living.

The EEP has helped raise U.S. agricultural exports during fiscal 1988 in Eastern Europe, North Africa, and some countries of the Middle East, South Asia, and Southeast Asia. It has played a particularly important role in 1988's expected \$1.5-billion increase in exports to centrally planned countries and expected \$2.5-billion increase in exports to less developed countries.

More than half of the \$5 billion in sales for the 3-year-old program occurred in fiscal 1988. The EEP has enabled U.S. exporters to match lower foreign prices. Rising U.S. prices could either increase the cost of the program to the United States or reduce the volume of exports under the program during 1989, depending on how world prices respond to U.S. price changes.

The Secretary of Agriculture, however, has stated that the EEP will continue. In any case, the EEP has never applied to corn and soybeans, the major export crops other than spring wheat most strongly affected by the drought.

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### U.S.-Japanese Agricultural Issues Are Clearing Up

The United States and Japan have clashed over several long-standing agricultural trade issues since 1987. Trade disputes over U.S. access to Japanese public construction projects and the semiconductor market, plus the large bilateral trade deficit (\$60 billion in 1987), seemed to exacerbate U.S.-Japanese friction over farm products. Farm trade disagreements included beef and citrus, 12 categories of mainly processed farm products (GATT-12 items), and rice.

Social and economic changes in Japan and pressure from abroad augur continued, but sometimes slow, progress toward a more liberalized U.S.-Japanese agricultural market. An example is the recent agreement to open up the Japanese market to U.S. beef and citrus.

During 1987, the United States asked Japan to eliminate import quotas on beef, oranges, and orange juice and to further expand its market for 12 other categories of farm products.

Other less prominent agricultural trade issues emerged. The United States sought reduced tariffs on several items, including chocolate, grapefruit, pet food, and walnuts. A potential problem over Japan's testing of U.S. pork shipments after detection of sulfamethazine (a growth-promoting antibiotic) was resolved in early March 1988 when the United States agreed to strengthen inspection of its pork exports. The United States holds about 7 percent (about \$90 million) of Japan's pork import market.

Despite these problems, the United States and Japan have, over the years, enjoyed generally good relations in farm trade. Japan is the largest single-country market for U.S. agricultural exports and a leading customer for many U.S. bulk farm products, such as grains and soybeans.

Furthermore, Japan is a potentially important market for U.S. high-value and processed products; Japan's global imports of these products have increased. The United States contends that Japanese consumers would benefit greatly from an open agricultural market. Moreover, the United States believes that certain U.S. products would stand to gain from freer access to Japanese markets.

### GATT Panel Rules Against Japan

In February 1988, the General Agreement on Tariffs and Trade Council formally adopted a panel recommendation that Japan lift import limits on 10 of 12 categories of agricultural products. Japan blocked earlier adoption of the panel's decision. Japan objected to the removal of restrictions on milk products and starch because it feared adverse regional effects on the farm economies in Hokkaido and Kyushu, its northern and southern islands.

The 10 restricted items (which exclude peanuts and dried beans and peas) are mainly processed or semiprocessed products, including processed cheese, preserved milk and cream, starch, processed beef products, noncitrus fruit juices and tomato juice, fruit puree and paste, canned pineapple, tomato ketchup and sauce, and grape sugar.

Japan's imports of the 12 product categories amounted to \$569 million in calendar 1987, with \$132 million or 23 percent coming from the United States. The U.S. share represents less than 3 percent of total U.S. farm trade with Japan (\$5.7 billion in calendar 1987).

As a result of the GATT ruling, Japan agreed to lift quotas on 8 of the 10 categories, but will maintain controls on starch and certain dairy products. The United States requested that Japan pay compensation for continuing import curbs on these items. Japan may also have to pay compensation to other inter-

ested exporting countries such as Australia, New Zealand, and the EC. In an effort to implement the GATT panel ruling, the United States and Japan are negotiating for improved market access for these products.

### U.S.-Japan Sign New Agreement On Beef and Citrus

Independent of the GATT negotiations, the United States pressed Japan to open up its market for beef, oranges, and orange juice. A 1984 U.S.-Japanese understanding on beef and citrus, which expanded import quotas over a 4-year period, expired March 31, 1988. After several months of negotiations, the United States and Japan signed a new agreement on beef and citrus on July 5.

As a result of the new agreement, Japanese quotas on beef and oranges will be removed after 3 years and those on orange juice after 4 years. The beef quota will be expanded by 60,000 tons per year to 394,000 tons in Japan's fiscal 1990 (April 1990-March 1991); then the quota will be eliminated. The 1987 quota was 214,000 tons.

To cushion the effect of removing the quotas, Japan will place higher tariffs on beef imports (currently 25 percent *ad valorem*): 70 percent in 1991, 60 in 1992, and 50 in 1993. The tariff will be 50 percent thereafter, subject to reductions in multilateral trade negotiations.

Japan may impose an additional 25-percent tariff if beef imports exceed the previous year's quantity by one-fifth. In addition, Japan's Livestock Industry Promotion Corporation, which controls most beef imports, will gradually reduce its involvement in beef trade by 1991.

Japan agreed to expand orange imports by 22,000 tons a year to 192,000 tons in its fiscal 1990, after which the quota will be removed. The previous quota was 126,000 tons. Tariffs of 40 percent in season and 20 percent at other times will remain in place. Japan also agreed to enlarge imports of orange juice from 8,500 tons in 1987 to 40,000 tons by 1991. After that, imports will be allowed in any amount. Import tariffs of 25-35 percent on juice will remain in place.

Japan will also eliminate the blending requirement for juice after 2 years and will

provide special access for single-strength and mixed juice. As part of the agreement, Japan will reduce or eliminate tariffs on several high-value products, including grapefruit, frozen peaches and pears, walnuts, macadamias, pecans, pistachios, lemons, pet foods, sausages, beef jerky, and pork and beans.

The U.S. dispute over Japanese restrictions on beef and citrus goes back more than 20 years. The issue was prominent during discussions in the Tokyo Round of Multilateral Trade Negotiations, leading to the Strauss-Ushiba Understanding of 1978, which provided for Japanese imports of grain-fed beef, fresh oranges, and citrus juice to be expanded over a 5-year period. Discussions during 1982-84 concluded in the Brock-Yamamura Understanding of August 1984.

As the date for expiration of the 1984 agreement neared this spring, Japan stepped up its efforts to settle the beef and citrus dispute through bilateral talks. In mid-March, Japan sent a high-level official from the Ministry of Agriculture, Forestry, and Fisheries to try to break the impasse.

The head of the farm panel of the Liberal Democratic Party (LDP) arrived in the United States for talks during the last week in March, and a delegation from Zenchu, the political arm of Japan's farm cooperatives, came to urge the United States to negotiate with Japan on beef and orange imports.

The Japanese Minister of Agriculture arrived at the eleventh hour in an unsuccessful attempt to resolve the issue before the agreement expired. The U.S. position was to refuse to negotiate unless Japan set a clear timetable to end quota limits. The United States consistently rejected Japan's offers to increase quotas in stages.

In early April, the United States sought to establish a multinational trade dispute panel to rule on the legality of Japanese quota restrictions on beef, oranges, and orange juice under the GATT, but was blocked by Japan. A GATT panel must be agreed to unanimously. The United States again requested establishment of a dispute-settlement panel at a GATT Council meeting in early May.

On April 27, Florida Citrus Mutual, an association of Florida citrus growers, filed an unfair trade complaint against Japan, claiming that its restrictions on imports of fresh oranges and orange juice violated GATT trading rules. As a result of the recently signed agreement, the United States will withdraw its GATT complaint, and Florida Citrus Mutual has withdrawn its petition against Japan.

### *Trade Potential Is Significant*

The potential for expanded U.S. trade of beef and citrus in a liberalized Japanese market is considerable, at least in the short-to-medium term. Most of the gain would come from expanded beef exports. ERS research indicates that, if all Japanese restrictions on beef imports and distribution were eliminated, imports likely would rise two- to threefold, and consumption would increase 55-60 percent.

Since the new beef agreement falls short of complete free trade, import growth and consumption are expected to be somewhat less than that. The United States likely would capture a considerable share of the enlarged market in the near term, given its ready position to supply the grain-fed beef that is preferred by Japanese consumers.

Over the longer term, predictions are complicated by the apparent quality differences between imported and domestic Japanese beef. Only a small proportion (less than 5 percent) of Japanese beef makes the top grades, and it comes from the native Wagyu breed. U.S. grain-fed beef is generally considered to compete with the middle grades of Japanese dairy steer beef, whereas Australian grass-fed beef competes with the lower grades of dairy steer beef.

Imports of fresh oranges are scheduled to expand by more than 40 percent under the new pact. The United States supplies almost all of Japan's fresh orange imports. The potential for growth in orange juice imports may be even greater than for fresh oranges because imported juice would be competitive with domestically produced mandarin juice, whereas imported fresh oranges are not regarded as close mandarin substitutes by most Japanese consumers.

The U.S. share of Japan's orange juice imports averaged 13 percent (by value)

during 1985-87, down significantly from 81 percent in 1975-78. However, the less expensive dollar and elimination of Japan's blending requirement, whereby orange juice must be blended with Japanese mikan juice, could mean greater sales of U.S.-produced, single-strength orange juice. The existing trading system favors imports of low-cost Brazilian frozen concentrate. Competition from Brazil has been keen since the mid-1970's.

### *Rice Is Sticky Issue*

The United States continued to press Japan to open its closed rice market, which the United States views as a symbol of Japanese protectionism. Under its food control system, Japan tightly regulates the production, distribution, and trade of rice. Japan imports only small quantities of glutinous rice for use in alcohol or confectionery products, and returning travelers are allowed to bring in small amounts.

In September 1986, the U.S. Rice Millers' Association brought an unfair trade practices complaint (under Section 301 of the 1974 Trade Act) against Japan's almost total ban on rice imports. The U.S. Government decided not to pursue the action, but urged Japan to discuss its rice policy in the current round of global trade negotiations. Japan has agreed to consultations on rice policy under the Uruguay round, but has refused to have bilateral discussions with the United States.

Rice is a sensitive issue in Japan because it is a food staple and is important in many Japanese traditions. Many older Japanese have bitter memories of hunger during and immediately after World War II, and many have ties to the farming community. The Japanese Government and the ruling Liberal Democratic Party (LDP), which derives much of its support from farmers, have steadfastly rejected demands to liberalize the rice market and have promised to maintain the present policy of self-sufficiency in rice.

Except for 1970-72 and 1980-83, Japan has produced more rice than it has consumed in the past 2 decades. This led to periods when the Government reduced burdensome stocks by subsidizing rice exports, using rice in feed, or limiting production through the diversion of riceland to alternative crops.

## Prospects for Freer Trade with Japan

The Japanese Government has resisted opening up its agricultural markets, including beef and citrus, because of strong allegiance to the farming community. The powerful farm bloc continues to exert significant political influence on the LDP, as well as on other parties.

The LDP's Agricultural Policy Research Council repeatedly voiced its opposition to U.S. demands to open Japan's beef and citrus markets. At the same time, the Japanese Government came under pressure from other economic interest groups to settle this dispute and other trade issues so as to lessen anger against Japan in the U.S. Congress.

Beef and citrus became a political symbol to the United States of the closed Japanese market. Beef and citrus represent a relatively small, but steadily growing, share of total U.S. farm exports to Japan, an area where the United States has traditionally enjoyed a bilateral trade surplus. By value these exports were about 14 percent of total U.S. agricultural exports to Japan in calendar 1987.

Promotion of value-added exports, such as beef and citrus, has become a matter of U.S. policy because they affect U.S. income and employment more than bulk commodities do. Japan consistently ranks as the top U.S. market for both beef and citrus.

Criticism of Japan's rice policies and pressure from its foreign trading partners to open its markets and reduce its trade surpluses started unprecedented debate in Japan over its agricultural policy, including agricultural import restrictions. The discussion and social changes in Japan are likely to make it politically feasible for the nation to move toward freer market access for agricultural imports.

The changes include an aging population with fading memories of World War II food shortages, a decline in the political influence of farm groups, and increasing awareness of the high cost of domestic agricultural products compared with overseas prices. [Lois Caplan (202) 786-1610]

## Soviet Livestock Sector Expanding

The Soviet Union is entering a period of economic reform. General Secretary Mikhail Gorbachev is trying to increase the efficiency of the Soviet economy and improve labor productivity. To motivate Soviet citizens' support, he needs to increase the availability of consumer goods, particularly meat. How the Soviet livestock sector expands, and at what rate, will directly influence future Soviet imports of grain and protein feeds. So, U.S. farmers have a stake in Soviet economic reform.

Over the past 20 years, virtually all the increase in Soviet domestic grain use came from increased feeding to livestock. The Soviet livestock sector is relatively large. Inventories of both cattle and hogs now exceed those of the United States.

The productivity of Soviet livestock, however, remains far below that of the United States. Beef production per head of cattle in the USSR is about 65 percent of the U.S. level, and this gap has not narrowed appreciably since the late 1960's. Soviet pork production per hog is about 60 percent of the U.S. level, and is slightly below what it was 20 years ago.

Reasons for the relatively low Soviet productivity include problems with management and labor incentives, the system of breed improvement, and a shortage of appropriate inputs. The overriding cause is probably poor-quality feed. The quality of Soviet roughages for fattening cattle is generally poor, and hog rations are short in protein.

The USSR produces about 70 percent as much meat as the United States. Because the Soviet population is larger, per capita meat consumption is about 55-60 percent of the U.S. level. By international standards, however, this is not low. Soviet meat consumption trails that in parts of Western Europe, such as Scandinavia and the United Kingdom, by 10-20 percent.

The problem facing Gorbachev is that current meat supplies are not sufficient to satisfy demand at present consumer prices. Despite recent increases, prices for most basic cuts of meat in Soviet state stores have increased little since the early 1960's.

Though prices of higher quality cuts have increased, as have prices in consumer cooperative stores and at farmers' markets, their influence has been overridden by steady increases in per capita disposable income. With price controls, higher incomes, and the continued unavailability of nonfood consumer goods, market shortages for meat have intensified.

The results are long lines, formal rationing in some regions, and growing consumer dissatisfaction. Boosting meat supplies is perhaps the most immediate way to demonstrate to consumers and workers the positive aspects of economic reform.

### Livestock Strategy Faces Major Hurdles

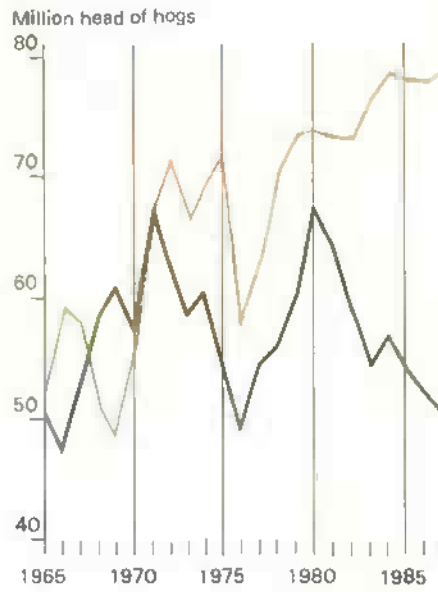
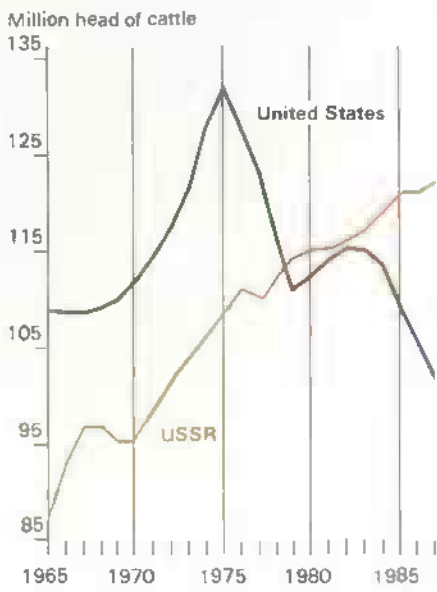
Two tenets of the Gorbachev livestock strategy are: (1) increasing output per head rather than further expanding inventory, and (2) limiting dependence on imported feed. If the Soviet leadership were fully committed to increasing meat consumption as rapidly as possible, it might recognize the USSR's comparative disadvantage in grain and oilseed production and shift production and trade accordingly. For a variety of reasons, though, this is not happening.

The Soviets hope to make the two tenets compatible by stressing beef rather than pork production. Most of the increase in Soviet pork production since 1970 has come from large hog complexes (some with over 100,000-head annual capacity).

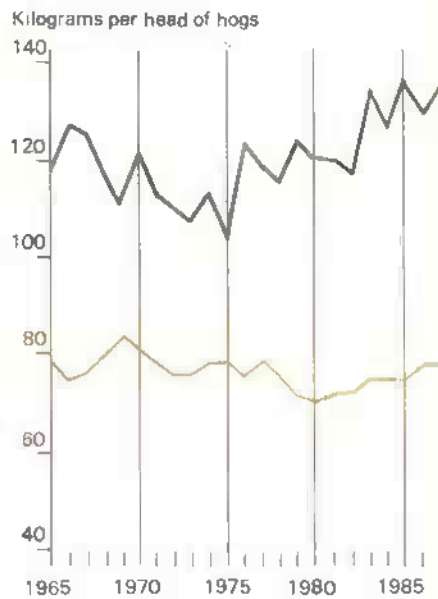
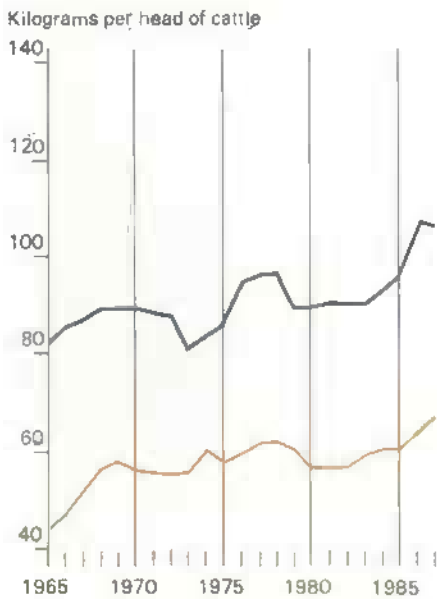
These complexes are highly dependent on imported feeds, but they have been de-emphasized in favor of both hog- and cattle-fattening operations that rely on local feed supplies. Although poultry operations also depend on imported feeds, poultry production likely will continue to increase at 4-5 percent per year, because feed conversion efficiency for poultry is relatively good.

The strategy of emphasizing beef production faces a number of difficulties. Milk yields have been increasing in the USSR since the early 1980's. Because the Soviets already produce a large amount of raw milk (the problem in the milk sector is more in processing, storage, and handling), cow inventories are being gradually reduced.

USSR Livestock Inventories Are Larger Than In the United States...



...But USSR Productivity Is Lower\*



\*Annual production divided by beginning-year inventory.

This inventory reduction would not pose a problem if beef cattle numbers were large, but beef breeds account for only 3-4 percent of Soviet cattle inventories. Most Soviet cattle are dual purpose. Soviet officials recognize that beef cattle numbers cannot be increased rapidly enough to play more than a secondary role in expanding beef production. Most of the burden will fall on increasing both calving rates and the rate of gain of dual-purpose cattle.

There is reason to question whether Soviet roughage quality and quantity can be increased enough to realize the intended productivity increases. Because of problems with harvesting and storing roughage feeds, their feed value is frequently well below what it should be. Improvements in roughage quality in the past 10 years have been relatively slow. To increase the rate of gain, a shift toward more grain feeding may prove essential.

Critically important in the future of Soviet grain for feed is the USSR's hard-currency position. Without adequate hard-currency earnings to pay for imports, meat production targets will undoubtedly be cut back. World market prices for grain and feed will also influence how rapidly the Soviet livestock sector expands. The degree of success of Gorbachev's reforms in agricultural management, organization, and wages will influence livestock expansion and feed imports.

**Retail Price Policies Add to the Meat Shortage**

A reform of Soviet retail price policy is now slated for 1991. As costs of producing agricultural commodities have increased, the Soviet policy of not increasing consumer prices commensurately has led to massive budget subsidies. Consumer subsidies for meat and milk products now exceed \$80 billion per year.

The 1991 price reform is certain to include higher retail meat prices. Some proposals talk about eliminating subsidies that keep retail prices low relative to farm prices. This would more than double retail meat prices. Such an increase would reduce the pressure on policymakers to increase meat production.

**More Protein Feeds Are Needed**

Increased protein imports could become a top Soviet priority. Even the most successful livestock farms in the USSR are not supplied with adequate protein. If the USSR were able to import and utilize enough protein feed, large feed grain savings could be realized in hog and poultry production, and livestock productivity would improve.

One of the principles of Gorbachev's approach to agriculture is to make input suppliers more responsive to farm requirements. For the mixed feed industry to satisfy farm needs, more protein must be available. Programs to increase domestic production of protein feeds are in place and have had some positive results, but they alone cannot solve the Soviet protein problem.

Combined imports of soybeans and soybean meal have picked up in the past

3 years and will reach a record in 1987/88. They likely will trend up in the next few years, although 1988/89 imports could be depressed by higher prices.

The prospects for Soviet grain imports are less bright. Although livestock expansion probably will require more grain feeding, a number of factors could moderate, or actually reverse, the uptrend. In recent years several steps have been taken to increase and stabilize grain yields: massive increases in fertilizer on grain, more careful use of pesticides, and improvements in labor organization and incentives.

Growth in Soviet grain production likely will exceed growth in grain use, and grain imports may gradually drop from the recent average of nearly 30 million tons per year. Even so, continued demand for feed grain by the livestock sector will dampen Government attempts to reduce grain imports significantly. [Edward C. Cook (202) 786-1624]

## Upcoming Economic Reports

Summary Released Title

### August

1	Fruit Yearbook
11	World Ag. Supply & Demand
16	Livestock & Poultry
17	Feed
19	Agricultural Outlook
22	Wheat
24	Dairy Yearbook
25	Exports
26	Foreign Ag. Trade of the U.S.
29	Cotton & Wool Yearbook
30	Farm Income & Finance
31	Vegetable



## Resources

### Future Potash Prices: Higher, But Less Volatile

Farmers faced record potash prices this spring as a result of a successful U.S. antidumping case against Canadian potash producers. The retail price of potassium chloride reached \$157 per ton in April, up 37 percent from a year earlier, and surpassed the previous high of \$155 in 1981 and 1982. An agreement to end the case, reached this January, provided a floor for future potash prices. Further price increases, however, will be tempered by excess supplies in Canada.

U.S. farmers used almost 4.9 million nutrient tons of potash during fertilizer year 1986/87 (July-June). Only about 15 percent of the potash came from domestic producers. Even at full capacity, net of exports, domestic potash producers can supply only 20-25 percent of the potash used by U.S. farmers. Ninety-five percent of 1986/87 imports came from Canada.

### Antidumping Legislation Is Toughening

Antidumping cases are not new to the fertilizer industry, especially potash. In addition to the latest case against Canada, U.S. potash producers have filed three cases over the past 6 years. Cases against Canada, the Soviet Union, East Germany, Spain, and Israel were all unsuccessful, except for a 1-percent duty

placed on Soviet potash. This duty had virtually no effect on the market.

The latest case, however, was successful for U.S. producers. In February 1987, two New Mexico-based potash companies filed a petition with the U.S. International Trade Commission (ITC) alleging that potash imports from Canada were sold in the United States at less than fair market value, thereby injuring the U.S. potash industry.

In March, the ITC determined there was reasonable indication that U.S. potash producers were injured by Canadian potash imports, and it turned the investigation over to the Department of Commerce. On August 20, 1987, Commerce announced a preliminary finding that Canadian potash had been dumped at margins ranging from 9.1 to 85.2 percent of fair market value. Thereafter, the posting of bonds or cash deposits was required on all potash brought to the United States from Canada.

Following Commerce's preliminary finding, the government of Saskatchewan ruled that the price of potash from publicly owned mines (Potash Corporation of Saskatchewan) would be increased \$35 per ton. This equals the 37-percent average of incremental duties imposed on Canadian producers. Private Canadian companies soon followed suit. By the end of September, the average spot price for granular potash increased to \$88 per ton, f.o.b. Saskatchewan. U.S. producers also raised prices; spot prices increased to \$85 per ton, f.o.b. Carlsbad, New Mexico, by the first week of October.

The government of Saskatchewan passed the Potash Resources Act in September, giving it the authority to set production levels for each potash mine in the province. To date, no official action has been taken. Despite higher prices, Canadian potash exports to the United States increased by 1 percent in the first 10 months of the 1987/88 fertilizer year over the same period a year earlier.

In January 1988, the antidumping case was suspended when eight Canadian potash producers and Commerce signed an agreement restricting Canadian producers from dumping potash in the United States at more than 15 percent of the preliminary margins set for each producer by Commerce last August.

The agreement is based on a previously unused section of trade law that allows a product to be sold at less than fair market value under extraordinary circumstances. The antidumping case is suspended until January 1993, but the agreement could be revoked if repeated violations occur.

After the agreement, the Potash Corporation of Saskatchewan lowered its prices \$16-17 per ton, and other Canadian producers soon followed. Granular potash prices, f.o.b. Saskatchewan, fell from an average of \$93.50 to \$78.50 per ton from early- to mid-January. Prices leveled off in February in the low \$80's, where they have remained. The Potash Corporation offered to rebate the full \$35 increase it initiated in September. Some Canadian producers followed its lead by offering partial-to-full rebates, while others offered none. The various rebate policies added to the market confusion, because deciding who bought what, and when, proved to be difficult.

#### Potash Prices Bounded From Below ...

The agreement will act as a floor below which prices will not fall unless Canadian potash producers test it. This price floor will be supported by the Potash Resources Act, because the threat of production controls discourages low-cost Canadian producers from selling below the price negotiated with Commerce.

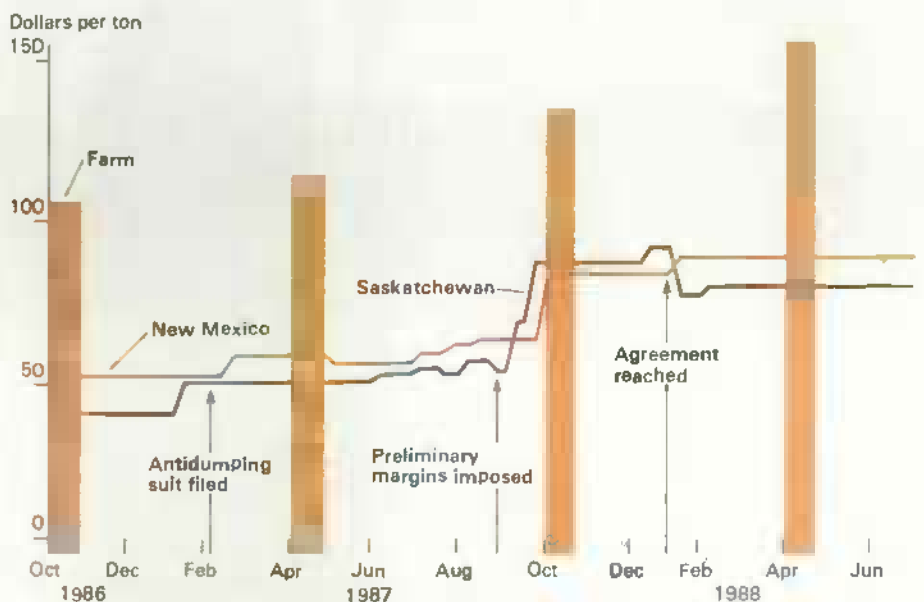
The farm prices of \$135 and \$157 in October 1987 and April 1988 may not be accurate guides to the price floor because of market uncertainty caused by the trade case and by the confusion created by the rebates. The price floor probably lies around \$130 for this fall. The price will rise in the spring as seasonal fertilizer demand increases.

#### ...And from Above

Several market factors likely will keep potash prices from rising above April's \$157. Although the United States depends on Canadian producers for most of its potash, Canada depends on the United States as its primary market. As the largest potash exporter in the world, Canada exports more potash to the United States than to all other countries combined.

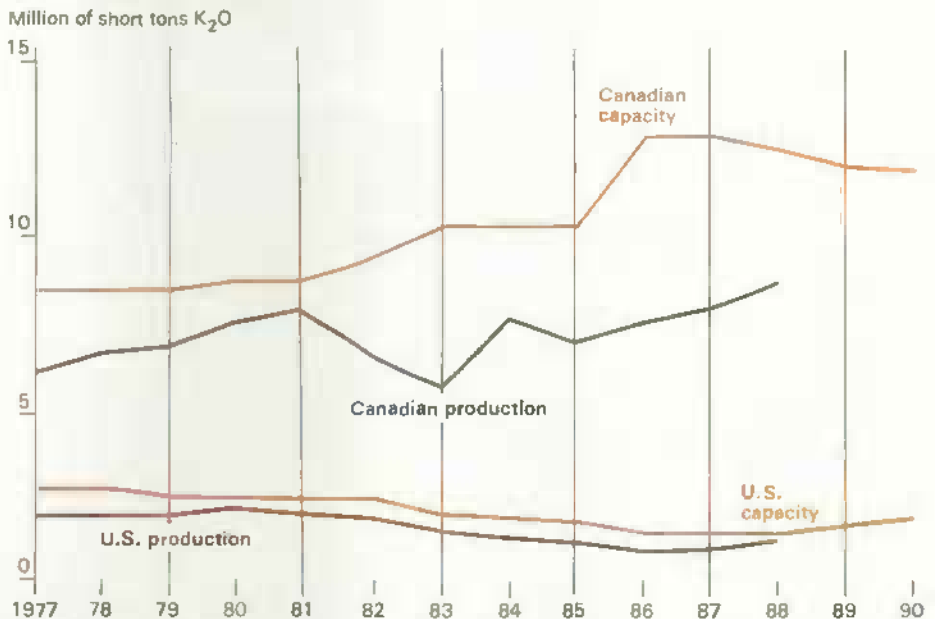
Moreover, Canada has the capacity to produce far more potash for export.

#### Potash Price Rises Due to Antidumping Suit



Source: "Green Markets," June 27, 1988, and earlier issues for weekly wholesale prices; *Agricultural Prices*, USDA, NASS, April 1988 and earlier issues for quarterly farm prices.

#### Canada's Potash Potential Greater Than the United States<sup>1</sup>



<sup>1</sup>Fertilizer year ending June 30.

During fertilizer year 1987, operating rates for potash plants in Canada averaged less than 60 percent of capacity, but rates moved up to about 66 percent through April of fertilizer year 1988.

Future potash prices will be influenced by crop area planted, crop prices, energy costs, and transportation costs. If the

agreement between the Department of Commerce and Canadian producers is not violated, potash prices above \$130 are likely through 1992. However, potash prices above \$160 probably would encourage use of the excess capacity in Canada, limiting any further price increases. As a result, potash prices over the next 4 years should remain relatively high, but comparatively stable. [Harry Vroomen (202) 786-1456]



## Animal Growth Hormones May Soon Affect U.S. Agriculture

Dairy farmers and livestock producers may soon use animal growth hormones to enhance productivity. The Food and Drug Administration (FDA) may approve the sale of bovine growth hormone (bGH) to dairy farmers and the sale of porcine growth hormone (pGH) to hog farmers by the early 1990's.

Growth hormones are not new; animals produce them in their pituitary glands. Supplements of additional growth hormone have been known for many years to boost productivity by improving overall feed efficiency and promoting livestock growth.

Until recently the hormone was regarded as a scientific curiosity, but the advent of recombinant DNA (rDNA) technology has taken growth hormone research out of the laboratory. Combining rDNA technology with standard fermentation techniques, scientists can now produce large quantities of pure growth hormone for commercial sale.

Like any new technology, growth hormones raise difficult questions. What will be the nature and magnitude of productivity increases on U.S. livestock and dairy farms, and on the agricultural economy? How will the commercial introduction of growth hormone technology affect production, prices of inputs and outputs, farm income, farm numbers, and location?

If the technology is easily integrated into current production practices, if its cost is low, and if it is effective, farmers will be likely to adopt it rapidly and the impacts could be large. However, there are limiting factors. For example, the hormone must be injected frequently. This may not be a problem for dairy farmers, but it is unrealistic for hog farmers or beef producers. A slow-release delivery system would be required before meat producers could rapidly adopt the technology.

The cost of commercial growth hormone to farmers could be relatively low. The revenue from use of the hormone depends on the effectiveness of the technology. Growth hormone will require good management skills and careful evaluation by producers to ensure that its

use is properly combined with existing practices and technologies.

Considering the history of technology adoption, the complexities of modern productive systems, and the varied responsibilities of today's farmers, it is unlikely that the growth hormone will be as effective on the farm as it has been in the laboratory.

### *Prices Would Generally Be Lower*

Assuming widespread adoption of bGH for both dairy and beef cattle and of pGH for hogs, changes in the prices of milk, beef, and pork will depend partly on the efficiency of the new technology and partly on changes in consumer demand for these products. Adoption should generally lead to greater output and lower prices.

The latest evidence indicates no change in the quality of milk produced by bGH-treated cows. Although bGH is a protein that is broken down in digestion like all other proteins, some opponents question the relationship of bGH consumption to human health.

The health issue will be a major consideration in the FDA ruling. The success of bGH technology may be determined by the battle for consumers' attitudes. In the next 10 years, adoption of bGH could force milk prices down as much as 8-10 percent from current levels, if prices are allowed to adjust to a support of \$8.60 per cwt. If these adjustments do not occur, dairy support expenditures could increase.

Pork produced from pGH-treated animals is quite different from that produced by untreated animals. The meat is visibly leaner and has a larger ribeye. The adoption of pGH would further promote what some refer to as "the new white meat." As with dairy products, there may be public debate as to the safety of pork from pGH-treated animals, and public acceptance is crucial to the success of the technology.

If the safety issue is resolved and pGH is approved by the FDA, one of two outcomes is likely. Demand could remain stable, and pork prices would fall slightly because of the increased supply. Or a favorable consumer reaction to leaner

pork could increase demand at the expense of chicken and fish, tending to support pork prices while lowering prices of competing products.

Growth hormone technology is unlikely to have much effect on beef prices. Consumers tend to prefer beef with marbling, whereas leaner cuts sell at a discount, so what could be a big selling point for pork may detract from beef. Little is known about the effects of bGH on the proportion of fat and lean in beef cattle. Faster growth rates and sale of younger animals with more lean relative to fat could affect the demand for beef. Growth hormone treatment of beef cattle may substitute for other growth compounds.

Feed prices could go up or down by 5 percent over a 10-year period, depending on the efficiency of the technology and on consumer demand.

One reason will be a change in the feed mix. For example, hogs would require more soybean meal to meet additional protein requirements for producing more meat and less fat. However, greater feed efficiency could lower total feed requirements for all livestock if consumer use remains constant.

### *Income Could Shift Among Types of Farms*

Although total farm income may change little from the introduction of growth hormones, the profitability of some enterprises is likely to shift. Less corn and more soybean meal will be demanded, for example.

Income may also shift geographically, partly because of regional variations in the location of affected enterprises. Because environmental factors affect production, the new technology could be less effective in some areas than others. Heat stress from high temperatures and humidity, for example, may decrease the effectiveness of bGH treatment of dairy cows in the Southeast.

### *Structural Change Accelerated In the Livestock Industry*

The effects of growth hormones on the dairy industry will depend on the effectiveness of the technology, its rate of adoption, and the level of Government expenditures. The effectiveness of the

technology and the likelihood of adoption are apparently not linked to farm size.

But there is a need for good management skills. Farmers who are already efficient and who are benefiting from other improved management practices (such as artificial insemination and dairy herd improvement programs) will benefit most from growth hormone technology.

The annual quantity of pork produced has held relatively steady as the number of hog farmers has declined from 2.1 million in 1950 to 470,000 today. Many improvements in management have been made as farm size has grown in the last quarter-century, including better veterinary care and breeding programs, full-confinement production systems, and better nutrition.

Improvements in management will help determine how pGH enhances output. The most able managers are likely to reap the richest rewards. It is not expected that adoption of pGH will cause structural change, except to reinforce and accelerate what is already underway. Livestock production in the South, for example, will continue to grow, and Southern soybean producers will benefit.

#### *Extent of the Changes Could Be Moderate*

Projection of results from a few laboratory experiments can suggest catastrophic effects on agriculture and tremendous increases in production following the introduction of growth hormones. However, moderate effects spread across many markets and sectors are more likely.

The tendency will be toward increased output, lower prices received, lower feed costs, and possibly lower farm income. Most important will be income shifts among enterprises and regions.

More milk from bGH-treated cows will require a reevaluation of dairy price supports and milk marketing orders. Some farmers who are having trouble competing may not be able to realize benefits from the new technology. Neither large numbers of farm failures nor a major upheaval in agriculture is likely from the introduction of growth hormones. [John McClelland and Fred Kuchler (202) 786-1462]

## CRP Benefits Water Quality

Groundwater contamination and protection of underground drinking water supplies are becoming critical issues in the agricultural community. Twenty-three different pesticides have been found in drinking water wells in 24 States, and underground aquifers supply drinking water to 97 percent of the rural population.

The Conservation Reserve Program (CRP) was not targeted to improve groundwater quality, but it may help reduce the potential for groundwater problems in some areas. Agricultural activity has been identified as a contributor to the pool of chemicals contaminating groundwater. As CRP acreage is removed from production, pesticide and nitrogen fertilizer use on those acres is reduced. Benefits to groundwater quality are greatest on acres that are highly vulnerable to contamination.

#### *New Index Estimates Groundwater Vulnerability*

The vulnerability of an area to groundwater contamination is determined by factors such as the depth to groundwater, the soil type, the topography, and agricultural practices. The Environmental Protection Agency (EPA) has developed an index, called DRASTIC. DRASTIC takes into account

seven hydrogeological factors: D for Depth to water table, R for Net recharge rate, A for Aquifer media, S for Soil media, T for Topography, I for Impact of the vadose zone, and C for Hydraulic conductivity of the aquifer.

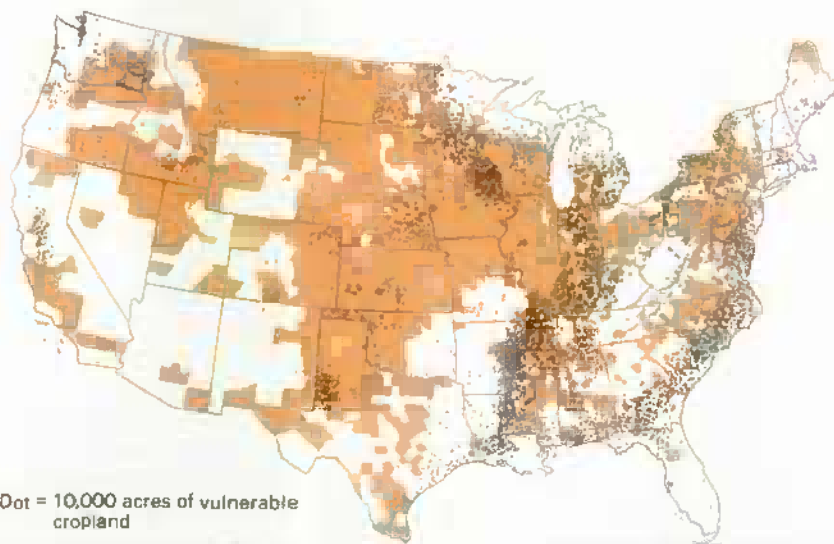
With the help of the 1982 Natural Resource Inventory and the Soils-5 Interpretation records, DRASTIC scores have been calculated for each county in the United States. Although a high DRASTIC score does not mean that a groundwater contamination problem exists, it indicates the potential for contamination problems.

#### *Twelve Million Acres of CRP-Eligible Land May Be Vulnerable*

Over 75 million acres of cropland were identified as potentially vulnerable to groundwater contamination, according to DRASTIC scores. Nearly 92 million acres planted in 12 major crops fall within the CRP eligibility criteria. The overlap of vulnerable land eligible for CRP is 12 million acres. That is, if all the eligible vulnerable acreage were enrolled, the CRP sign-up could reduce the potential for groundwater contamination from pesticides and fertilizer on 12 million acres, according to ERS estimates.

Over 55 percent of the eligible cropland in the Delta States is vulnerable to pesticide and fertilizer contamination,

CRP Could Reduce Groundwater Pollution on 12 Million Acres



1 Dot = 10,000 acres of vulnerable cropland

Shaded areas identify counties with at least 10,000 acres of CRP-eligible cropland.

### Regional Distribution of Eligible and Vulnerable Cropland 1/

Region	CRP-eligible	Pesticide-vulnerable	Eligible and vulnerable	Total cropland
1,000 acres				
Northeast	3,744	6,132	733	14,951
Appalachian	5,658	11,666	2,515	19,110
Southeast	2,283	8,667	945	12,666
Lake States	5,355	12,862	1,174	39,105
Corn Belt	21,165	11,690	1,018	89,563
Delta States	2,108	9,812	1,164	17,445
Northern Plains	16,019	4,079	559	86,646
Southern Plains	15,705	4,645	3,025	39,675
Mountain States	16,173	2,754	863	37,347
Pacific	3,523	3,147	323	15,166
<b>Total U.S.</b>	<b>91,734</b>	<b>75,452</b>	<b>12,317</b>	<b>371,675</b>

1/ Includes 12 crops: corn, sorghum, soybeans, cotton, wheat, oats, barley, summer fallow, cool and warm season grass/hay, and legume and legume-grass/hay. Totals do not add to published Natural Resource Inventory (NRI) figures, which include additional crops.

### Coincidence of Eligible and Vulnerable Cropland

CRP-eligible and pesticide-vulnerable cropland as a percentage of:

Region	Eligible cropland	Vulnerable cropland
Percent		
Northeast	19.6	12.0
Appalachian	44.4	21.6
Southeast	41.4	10.9
Lake States	21.9	9.1
Corn Belt	4.8	8.7
Delta States	55.2	11.9
Northern Plains	3.5	13.7
Southern Plains	19.3	65.1
Mountain States	5.3	31.3
Pacific	9.2	10.3
<b>Total U.S.</b>	<b>13.4</b>	<b>16.3</b>

whereas the Corn Belt and Northern Plains have relatively small percentages of vulnerable land (4.8 and 3.5 percent).

Over 65 percent of the vulnerable cropland in the Southern Plains falls under CRP eligibility requirements, compared with only 9 percent in the Lake States and Delta States. [Kenneth Algozin and Wen-yuan Huang (202) 786-1403]

### Sixth CRP Signup Adds 3.4 Million Acres

The sixth signup period for the CRP in February 1988 brought an additional 3.4 million contracted acres into the 10-year cropland retirement program. This signup brought total CRP enrollment to 25.5 million acres, more than halfway to the 1990 goal of 40-45 million.

Of the 3.4 million acres contracted in the sixth signup, 2.1 million (62 percent) were scheduled for retirement in crop year 1988. The remaining 1.3 million acres (38 percent) will be retired in crop year 1989. Annual rental payments to be received by farmers averaged \$47.90 per acre. Annual soil erosion reductions will average 18 tons per acre.

More than one-third (1.15 million acres) of the land enrolled in the recent signup was located in the Northern Plains. The Southern Plains included 500,000 acres, and the Mountain States, 442,000.

As reported in last month's *Agricultural Outlook*, the amount of land eligible for CRP was increased prior to the sixth signup to encourage tree planting and to improve water quality. These changes

stimulated the enrollment of 396,600 acres designated for tree cover.

Most of the tree-planting acreage was in the Southeast (68 percent); a smaller percentage (19) was enrolled in the Delta States of Arkansas, Louisiana, and Mississippi. CRP eligibility changes led to the enrollment of approximately 16,000 acres of filter strips. Most of the land enrolled in the sixth signup was designated for grass cover—2.6 million acres.

### CRP Filter Strips Improve Water Quality

The addition of filter strips (also referred to as buffer strips) to the list of approved CRP conservation practices is a change in USDA's approach to the CRP. Filter strips, areas of close-grown vegetation 66-99 feet wide that are planted next to water bodies, protect water quality by reducing the runoff of sediment, pesticides, and nutrients and the transfer of micro-organisms into lakes and streams.

Filter strips are an attractive water-quality management tool because significant pollution control can be achieved with only a small change in land use. By placing filter strips along a stream, a farmer provides nearly the same water-quality benefits as by employing soil conservation practices on all land draining into the stream.

Following the sixth CRP signup, 1,490 filter strip contracts were approved, covering 16,119 acres. The strips provide 1,600 miles of runoff protection for surface waters. USDA's share of the cost of establishing the filter strips will average \$45 per acre, and yearly CRP rental payments on them will average \$56 per acre.

Based on their enhancement of recreational values and on their reduction of costs associated with sediment removal, flooding, reservoir sedimentation, and damage to water-using machinery, the 1,600 miles of filter strips are estimated to provide annual benefits of approximately \$922,000.

Because they require only a small amount of land, the acreages enrolled in filter strips will be small when compared with those in other CRP conservation practices. With increased awareness by farmers of the eligibility of filter strips in

Filter Strips Contracted in Sixth CRP Signup

Region	Acres	Avg. Gov't cost share	Avg. yearly rental	Annual water quality benefits
		----- \$/acre -----		\$1,000
Northeast	506	108.85	57.04	31.3
Appalachia	4,168	50.86	51.36	326.4
Southeast	2,816	38.13	44.49	135.2
Delta States	2,149	39.23	45.58	144.6
Corn Belt	3,600	42.81	71.73	158.0
Lake States	1,730	33.04	69.18	87.9
Northern Plains	1,034	47.44	56.68	23.3
Southern Plains	61	43.33	48.03	3.9
Mountain	29	43.93	47.55	3.8
Pacific	24	43.38	50.54	7.2
United States	16,118	44.92	56.35	921.5



Transportation

the CRP, even larger enrollments can be expected in future signups.

**CRP Has Reduced Base Acreage Of Program Crops**

Although the primary purpose of the CRP is to reduce cropland erosion, retired cropland also reduces the base acreage of USDA commodity programs, thereby reducing outlays for other Government programs. In the sixth signup, 2.1 million acres of commodity base were retired for the duration of the 10-year contract period. Of this amount, 1 million acres (or 48 percent) represented wheat base acreage. Corn, barley, and sorghum bases were reduced by 272,000, 259,000, and 236,000 acres, respectively.

The seventh CRP signup period was recently extended by 4 weeks to include July 18 to August 31, 1988. The extension permits farmers to weigh the effects of the drought before enrolling. If the seventh parallels earlier signups, enrollment of 3 or 4 million acres could be expected. A modest amount of this enrollment would be for 1988, but the bulk would be for retirement in 1989.

Because of this summer's drought, enrollment in the seventh signup may be less than expected. Although some farmers with significant crop losses may be at-

tracted to the CRP for the guaranteed rental payment, sharply higher commodity prices caused by the drought may be an incentive for some farmers to remain out of the CRP for now.

**Drought Provision Permits Haying on CRP Land**

To help farmers suffering from drought, USDA is allowing producers in designated drought-affected counties to harvest grass on CRP land through August 31. Haying, grazing, and other commercial uses of forage are not normally permitted on CRP land. As of July 19, 2,064 counties had been approved for CRP-haying under the special provision. Grazing on CRP land, which is inconsistent with the program's long-run conservation goals, is still prohibited. The special provisions are subject to change on short notice.

Farmers wanting to take advantage of the special haying provision are required to comply with several conditions: (1) mowing no closer than 3 inches, (2) preserving 10 percent of the grass cover acreage, and (3) leaving buffer strips of uncut grass. In exchange for haying privileges, farmers are required to forgo 25 percent of their 1988 CRP rental payment for hayed acres, except for an exemption for donated hay. [Tim Osborn and Marc Ribauda (202) 796-1434]

**Grain Transportation Under Stress**

Drought and high demand are straining the U.S. grain transportation system. Barges, river elevators, and ports on the Great Lakes have had their volume reduced by low water. Record demand for rail and truck service is likely to exceed capacity. So shippers face sharply increased transportation costs.

**Barge Capacity Greatly Reduced**

In mid-June, low water levels on the lower Mississippi and Ohio Rivers began to halt barge traffic at choke points for more than a day. By the end of the month stoppages were a daily occurrence.

Water depth at the mouth of the Ohio in mid-June was 17 feet below normal. At Memphis, the water was 12 feet below normal. Channel widths were reduced from 500 feet to 200 feet, which decreased the number of barges that could be towed abreast and increased the number of bends at which tows had to be disassembled to proceed.

To continue service, barge operators reduced individual barge loads by 10 percent. Some operators reduced the number of barges in a tow by 25-30 percent. Others retained tow sizes, but encountered lengthy delays as tows were broken up to navigate bends in the river.

Under normal conditions, tows of 30-50 barges are common on the lower Mississippi. To maintain safe navigation, the U.S. Coast Guard has now restricted tows to as few as 25 barges moving upstream and 20 barges downstream, and it has restricted drafts to 8.5 feet from the usual 9.

Reduced load size, smaller tows, and lengthened transit times have reduced the carrying capacity of the Mississippi River system by 35-40 percent. Difficult navigation and increased travel time add to costs, especially for fuel and labor, which normally account for about 35 percent of total operating costs.

### *Barge Rates Soar*

Because of an 8-percent increase in demand this year, barge rates in January to May averaged 23-24 percent above 1987. In the first 2 weeks of June, rates rose 4 percent from the end of May. By the end of June, rates had nearly tripled from the end of May. This increase was short lived, though. In the first week of July, rates fell to about 125 percent above the end of May, where they will probably stay until navigation conditions improve. This put rates from Peoria at about \$14 per ton.

Higher transportation costs and reduced capacity substantially increased barge-delivered corn prices at Louisiana Gulf ports. Between June 17 and June 23, prices rose from \$3.31-\$3.32 per bushel to \$3.63-\$3.66. These ports account for about 50 percent of U.S. grain exports and receive 90 percent of their grain, chiefly corn, by barge. Similar price increases are anticipated in the poultry-producing areas of the Southeast. Barges normally carry about a third of the grain shipped to these States.

### *Port Facilities Hampered*

Falling water levels will prevent some river elevators from loading barges even to the reduced drafts. Moreover, water levels in the Great Lakes are now 4-16 inches below 1987 levels. The Vidal Shoals between Lakes Superior and Huron are critical. Here, low water has cost a foot of draft for the already relatively small ocean vessels serving the Great Lakes. A foot of draft represents about 3,500 tons of cargo. Ocean-going vessels serving the lakes average about half the capacity of those docking at the Gulf, and rates are about twice as high.

Although some export traffic is expected to be diverted to Great Lakes and Atlantic ports, higher rail and ocean rates will limit the diversion.

Trucks are not a viable substitute for the reduced barge capacity. A fully loaded barge holds 1,500 tons of grain, about 35 truck loads. A bumper-to-bumper, mile-long truck convoy would replace about 2.3 barges. On one day, 1,760 barges were stacked above Greenville, Mississippi, 287 miles from New Orleans. Grain in these barges would have filled a line of trucks 755 miles long.

### *Rail Car Demand a Record*

From May to June 1987, rail car loadings of grain rose 23 percent to 32,150 cars per week, surpassing the November 1979 record of 32,558. The new record was exceeded again in October. March 1988 saw another record grain-loading of 34,240 cars. At these high levels, many shippers experienced delays of 2 weeks or more. The Association of American Railroads said there was an average daily shortage of 8,000 cars in April.

The tight car supply seemed likely to continue throughout 1988, even before river traffic slowed. In view of the large grain disappearance anticipated for the 1988/89 crop year (288 million metric tons), demand for rail service promises to remain high. Total demand for rail car loadings in 1988 is estimated at 1.7 million cars, 12 percent above 1987.

Part of the problem lies in the availability of jumbo covered hopper cars. These cars (each carrying about 96 tons of grain) are the predominant vehicle for rail shipments of grains and oilseeds.

The jumbo covered hopper car fleet rose from 186,000 to 239,000 cars between 1980 and 1986, but increases were small in the later years. Scrapping of overage and damaged cars slightly reduced the fleet to 236,000 by 1988.

Nearly half the jumbo cars are owned by nonrailroad firms. Many are under the control of grain-marketing firms. Only 2,000 jumbo grain cars are on order, and delivery will not begin until September 1988. Long-term prospects are no more optimistic. During most of the 1980's, railroads held a large surplus of cars.

Thus, numerous rail spokespersons have indicated that railroads are unwilling to increase their fleets when continuance of record demand is in doubt.

The number of covered hopper cars is but one factor in rail car supply. For a given shipment, the demand for cars is best measured in car days, the number of cars needed times the number of days required to complete the shipment and return the cars for loading. The amount of tractive power (the number of locomotives needed to pull a train and the time required to make a round trip) is also significant.

### *Increased Exports a Factor*

Much of the expected increase in demand for rail cars results from larger grain exports. During the first 6 months of 1988, 316,500 cars of grain were delivered to Atlantic, Gulf, and Pacific Coast ports, a 44-percent increase from the same period of 1987. (Data for rail shipments to the Great Lakes are not available.) In 1986, exports accounted for 26 percent of rail-transported grain. In 1988, the share is expected to jump to 42 percent.

Car supply could be increased if the time spent unloading at ports were reduced. However, such gains may have already been realized. In the first 6 months of 1987, 74 percent of all cars delivered to a port were unloaded within 7 days. During the same period this year, 80 percent of all grain cars were unloaded within 7 days, despite the increase in arrivals at ports.

In 1986, each hopper car was loaded slightly more than five times per year. In 1987, loadings per car increased to more than six per year. Further major improvement in car utilization appears unlikely.

### *Distribution Patterns Have Shifted*

In recent years, favorable rates became available for shipments of wheat and corn from Kansas and Nebraska to Pacific Northwest ports. These rates, combined with relatively low ocean rates from the Pacific Northwest to major Asian markets, resulted in substantial flows of corn and wheat from Kansas and Nebraska to Puget Sound and Columbia River ports.

Such shipments consume more car days and tractive power than do similar shipments from Oklahoma and Texas to the Texas ports. North Platte, Nebraska, is 1,400 miles from Portland, three times farther than Oklahoma City is from Houston. Moreover, the route to the Pacific Northwest passes through mountainous terrain, which requires increased tractive power.

Rail unloadings of grain at Pacific Coast ports increased 35 percent to 141,000 cars between 1986 and 1987. This year, 202,000 cars will probably be unloaded at these ports, 43 percent above 1987.

Estimates made before the river stoppages began indicated that nearly 1.7 million carloads of grain would be required to meet 1988's needs for exports and domestic use of grain. Given predrought distribution patterns, these needs could be met. The rail system will, however, be severely strained until river navigation returns to normal.

#### **Rail Rates to Rise**

The Burlington Northern (BN) system announced a series of increases in its Certificate of Transportation program. Under this program, shippers of wheat and feed grains bid for rail cars. Minimum rates are set for various routes and grains at each session.

BN has announced that the June 23 rate minimums are to be increased on the first of August, September, October, and December 1988. By September, rates for wheat from the Upper Great Plains to interior points such as Springfield and St. Louis could rise 27-29 percent. By December some rates are slated to increase as much as 83 percent. Similar increases can be expected for other railroads. [T.Q. Huchison (202) 786-1840]



## **Food and Marketing**

### **Drought To Give Small Boost To Retail Food Prices**

What will the drought do to food prices? There can be no clear answer until the extent of drought damage can be measured. Nevertheless, based on previous drought experiences, a pattern of how food prices may change can be estimated.

The drought has damaged food and feed grains. It has hurt soybeans. And some fruits and vegetables have been threatened. Crop yields are down, lowering supplies of a number of commodities and pushing prices up.

Higher prices for raw farm commodities, however, do not directly translate into higher retail food prices. First, retail prices include the cost of transforming raw farm commodities into finished consumer products. The raw farm commodities generally account for less than a third of the retail food price. The remainder goes to processing, packaging, and transporting foods.

Not all food prices increase immediately as a result of drought. In the case of meats, higher feed grain and hay prices may force producers to sell off some of their breeding herds. This increases meat supplies and drives prices down in the short run. Later, the smaller production base means lower meat production and higher prices.

Foods most affected by the 1988 drought are meats, fats and oil products, cereals and bakery products, some vegetables for canning, and some fresh fruits. Should livestock producers liquidate cattle and hogs, retail prices for livestock products will be lower than previously expected. Smaller soybean supplies will mean higher prices for vegetable oils. Consumers probably will notice slightly higher prices for margarine and cooking oils.

Durum wheat is in tight supply because of severe drought in spring planting areas, such as the Dakotas and eastern Montana. This will raise prices for pasta products. Consumers likely will notice some bread prices increases, but they will be only partly caused by the drought. Higher prices for packaging materials will have more impact on retail bread prices than will the drought.

Most green peas, sweet corn, and snap beans for freezing and canning are grown in drought-affected areas. Supplies of these vegetables are likely to be reduced, and prices increased. Most other vegetables have not been seriously affected by the drought. Fresh fruits, primarily apples and cherries from Michigan, will be reduced. However, this will have little effect on average prices at the national level.

The 1988 drought is considered the worst in many years and some food products will be in short supply. However, there will be no food shortage because certain regions and crops were not affected and because carryover stocks are being drawn down. Therefore, retail food prices are not expected to rise dramatically.

USDA's forecast before the drought was for 1988 food prices to rise 2-4 percent over 1987. With the drought, prices likely will rise to the top of that range or slightly higher. A range of 3-5 percent is now forecast. [Ralph Parlett (202) 786-1870]



## Rural Communities Touched by Drought on Farms

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An early summer drought hit California, eastern Oregon, and Washington in the west, the northern Great Plains and Corn Belt in the north, and the southern Appalachian and interior uplands areas in the southeast.

The northern and southeastern drought areas rely heavily on rainfall for crop production and are more likely to feel the immediate effects of heat and dryness. Except for rangeland areas, agriculture in the western drought area depends on irrigation water provided either from reservoirs that collect snowpack runoff or from major rivers such as the Colorado, Columbia, and Snake. Most of these areas appear to have adequate water this growing season.

However, if next winter's snowpack is insufficient, western water supplies for crop production will be at risk. Some water districts in the west have already notified farmers that 1989 water supplies will be interrupted unless there is adequate snow.

Some farmers were affected by severe or extreme drought as of June 11. The drought had spread further by early July, particularly in the Corn Belt. (See maps on page 2 for the geographic spread of the drought in June and July.) This analysis considers farms and rural communities in the areas that were among the first to experience unusually hot and dry weather.

The 782 counties stricken by drought in mid-June account for 29 percent of all farms. They produce about 20 percent of U.S. corn and soybeans, 32 percent of cotton, and close to 40 percent of oats and wheat.

About 25 percent of the Nation's livestock and 35 percent of poultry are here. About 20 percent of the total employment in drought counties is in farm production, farm input industries, and farm processing and marketing.

### *Small Effects on Farmers' Demand For Inputs Expected This Year*

Nationwide, the drought will have little immediate effect on farm-related industries. Businesses that manufacture or distribute agricultural inputs have so far been almost unscathed, since rainfall was normal when farmers purchased most of the seed, fertilizer, and chemicals needed for the 1988 spring planting. Of course, if accounts receivable become uncollectable or if late crops are not planted, as may be the case in some areas, input suppliers will be adversely affected.

The farm machinery industry will be hurt in drought areas if a small harvest weakens demand for harvesting, drying, and storage equipment. Farmers with reduced cash receipts will put off buying new equipment.

Energy consumption will increase for some types of farms and decrease for others. Farms with fewer harvested acres, lower yields, and less need for drying will lower energy consumption. However, those that irrigate will increase energy consumption because the 1988 irrigation season began so early. They may have to pump more water and pump from greater depths.

Input industry prospects for spring planting next year, however, appear promising since the 1988 drought will reduce commodity stocks and increase commodity prices. This should increase planted acreage and thereby increase input demand.

### *Income and Employment Will Shift Within Farm-Related Industries*

The drought affects agricultural processors in different ways. Larger sales of livestock, because of shortages of forage and higher feed costs, will increase the volume of business in meat packing and processing.

Some processed vegetables, such as dry edible beans, green peas, sweet corn, and snap peas, will be in reduced supply because production is concentrated in the Lake States affected by the drought. The processing volume of most grains and oilseeds will be partly maintained by drawing down the large carryin stocks. However, higher prices will reduce total quantity demanded by all users, domestic and foreign.

Firms involved in the transportation and export of grains and soybeans are likely to be adversely affected by the drought, because of both reduced production and reduced transportation capacity. To date, though, processors and handlers of grains and oilseeds have not seen widespread problems from the

Population and Employment in Drought-Struck Regions 1/

Item	Unit	Northern 2/		Southeastern 3/		Mountain 4/	
		Nonmetro drought counties	farm-dependent drought counties	Nonmetro drought counties	farm-dependent drought counties	Nonmetro drought counties	farm-dependent drought counties
Countries	Number	134	76	131	9	63	24
Population, 1986	\$1,000	1,878	639	3,552	153	835	84
Countries losing population: 1983-86	Percent	74	91	25	33	67	83
Total employment, 1984	Thousands	698	246	1,286	46	316	32
Farm-related employment, total	Percent	39.4	49.3	35.0	43.0	25.9	50.5
Farm production	Percent	22.9	35.1	11.1	24.4	11.8	39.3
Direct agribusiness, total	Percent	5.1	6.1	14.8	11.4	2.6	3.0
Farm inputs	Percent	1.7	2.3	0.5	0.7	1.6	1.7
Farm processing and marketing	Percent	3.4	3.8	14.2	10.7	1.1	1.3
Indirect agribusiness	Percent	2.5	0.7	2.5	1.4	1.1	0.6
Food and fiber wholesaling and retailing	Percent	8.9	7.3	6.7	5.8	10.4	7.6
Farms	Number	108,381	58,332	93,907	5,829	24,384	7,843
Size of farm	Acres	660	820	132	166	3,154	3,372
Value per farm	\$	361,887	434,738	125,761	151,601	737,742	808,900
Value of farm sales:							
Per farm	\$	59,308	67,496	26,230	48,064	68,219	83,149
Share of sales from:							
Crops	Percent	49.0	56.9	23.7	12.7	44.8	55.6
Corn	Percent	7.9	8.2	1.7	0.3	0.2	0.1
Wheat	Percent	21.1	26.4	1.4	1.7	29.9	41.1
Soybeans	Percent	6.4	7.3	6.0	5.1	--	--
Cotton	Percent	--	--	1.9	0.6	--	--
Livestock	Percent	47.5	38.3	75.1	87.3	55.2	44.5
Cattle	Percent	17.1	17.6	12.4	9.1	47.0	39.2
Poultry	Percent	4.0	2.0	43.0	61.0	--	--
Dairy	Percent	17.0	10.0	13.0	13.0	2.0	--
Share of operators reporting:							
No off-farm work	Percent	50.9	53.5	30.9	33.7	46.9	54.9
200 days or more off-farm work	Percent	17.6	13.2	43.1	39.1	22.3	13.7
Share of sales from farms with sales of:							
Less than \$10,000	Percent	1.7	1.1	8.3	3.6	1.6	0.9
\$10,000-\$39,999	Percent	12.0	11.2	11.7	6.0	8.7	7.4
\$40,000-\$99,999	Percent	30.5	30.1	13.3	11.5	21.4	22.7
\$100,000-\$249,999	Percent	31.7	33.7	26.9	34.9	31.3	35.5
\$250,000 or more	Percent	23.7	23.3	38.0	43.5	36.3	33.3

1/ The column labeled "Nonmetro drought counties" includes the farm-dependent drought counties. 2/ Includes North Dakota, South Dakota, Minnesota, and Wisconsin. 3/ Includes North Carolina, Tennessee, Alabama, and Georgia. 4/ Includes Montana and Wyoming.

drought. But plants that depend on barge shipping on the Mississippi River, for moving either inputs or products, are already facing shortages and delays. (See article on "Grain Transportation Under Stress" in this issue.)

**Most Stress Is in Agriculture-Dependent Counties**

Financial stress for farmers may mean hardship for others who depend on agriculture for jobs and incomes. For example, nearly 13 percent of all jobs in the agricultural input industries are located in drought-affected rural counties. About 10 per-

cent of farm processing and marketing jobs are also located there. Areas and communities most seriously affected include:

- *Counties with a high proportion of financially stressed farmers.*—Of the drought-stricken areas, the Lake States and northern Great Plains exhibit the highest levels of remaining financial stress. In the northern Great Plains, 5 percent of all farmers remained in a vulnerable financial position, having debt-asset ratios of 40 percent or more and farm income losses as of the beginning of 1988. Although the percentage of financially vulnerable farmers is down sharply from 1987, the drought has threatened the financial recovery of many farmers in these counties.



- *Communities that depend on farm-related businesses.*—Increased financial stress in the northern Great Plains creates difficulties not only for farmers but also for farm-related businesses and rural communities. Local credit institutions face a growing volume of problem loans. (See “Outlook for Banks in Drought-Stressed Counties” in this issue.) Some local businesses may suffer losses because farmers cannot pay for goods and services purchased on credit.
- *Rural areas in the northern Great Plains that lack a diversified economic base and whose potential for job growth is low.*—More than one-third of the labor force in such areas is employed in agriculture and farm-related industries. Nonfarm parts of those local economies have recovered only partially from the recessions of the early 1980’s. Slow growth in nonagricultural industries will make it more difficult for farmers to find nonfarm jobs. Such communities may lose population.

In contrast, other drought counties depend relatively little on farming as the major economic activity. For example, 186 of the drought counties are metropolitan; that is, they contain or border a major city. For most residents in metropolitan counties there is little immediate danger of financial risk or economic dislocation, but residents may face minor restrictions on water usage such as watering lawns or washing cars so as to allocate more of the scarce supply of water to agriculture.

#### *Northern Region Hard Hit by Drought*

The Dakotas, Minnesota, and the northwestern counties of Wisconsin are severely affected by the drought. In these four States, 134 counties are experiencing severe or extreme drought. About half (76) of these counties are farm-dependent, and many communities have little nonfarm-related economic activity.

Population and employment illustrate the northern region’s extreme vulnerability to farmers’ problems. The average nonmetro drought county’s population is 14,000, but the farm-dependent drought county’s population averages only about 8,400 people. About 75 percent of the region’s nonmetropolitan drought counties lost population during 1983-86; 91 percent of the farm-dependent counties lost population. About 40 percent of the jobs in the average drought county are in the farm sector or in industries directly linked to farming. In farm-dependent counties, the percentage is up to almost 50.

Farming operations vary by size and enterprise across the northern drought region. Wheat and cattle are important in western areas, and diverse, smaller operations are more prevalent in eastern areas of it. For all nonmetro counties in the region, wheat sales are the most important component of farm sales, followed by sales of cattle and calves.

Because of extreme winter cold, farmers in this region plant spring grains—wheat, barley, oats, and rye. These crops have suffered major drought losses. Cattle operations normally

depend on rangeland feeding during the summer, but this year there is not enough forage, and farmers are faced with a decision to supplement grazing with purchased feed at increasing prices or to market these cattle early. Dairy farmers also face the prospect of increasing feed costs for this year and next.

Off-farm employment for farm operators in the northern drought counties is far less prevalent than in other areas, partly because little nonfarm employment is available.

#### *Southeastern Nonfarm Jobs Less Affected by Drought*

Clustered in northern Georgia and Alabama, eastern Tennessee, and western North Carolina are 131 nonmetro counties seriously affected by the drought. Only nine of these counties are classed as farm-dependent; the rest have a relatively broad economic base. In many of these 131 counties, nonfarm industries, particularly manufacturing, are far more important than farming. Almost half of all farm operators work off the farm.

The population of the average drought-affected nonmetro county is 27,000 people. About one-fourth of these counties lost population in 1983-86. Although 35 percent of the jobs are in farm-related industries, food processing employs more people than farming. The poultry-processing industry is a major employer.

Poultry sales comprise 43 percent of all farm sales in the area, suggesting the region’s vulnerability to the higher feed prices caused by the drought and to the effect of heat on the birds’ health and feeding efficiency.

#### *Mountain Region’s Wheat and Cattle Producers Heavily Affected by Drought*

Montana and Wyoming are the most severely affected States in the Mountain region. The average population of the 63 nonmetro drought-affected counties is about 13,000 people. Two-thirds of these counties lost population in 1983-86.

Twenty-four drought counties are classified as farm-dependent. One-fourth of the jobs in the drought nonmetro counties are in farming or farm-related businesses. Farm employment accounts for 12 percent of all employment in the drought nonmetro counties. Most farm operators work full time on the farm, so they are hurt more by income losses from the drought than farmers in other regions who have supplemental incomes.

Wheat and cattle represent over three-fourths of all farm sales in the region. In contrast to the southeastern area, food processing accounts for only 1 percent of total employment. Wheat is primarily shipped out of the region, much of it going to export markets. Feeder cattle are generally shipped to other regions.

Nondrought counties in the Mountain region rely more than the drought counties on mining, tourism, and Federal lands as their major sources of economic activity. [Fred Hines, Mindy Petrulis, and Judith Sommer (202) 786-1525. For information on farm inputs, contact Stan Daberkow (202) 786-1464]

# Statistical Indicators

## Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1987				1988				
	I	III	IV	Annual	I	II	III F	IV F	Annual F
Prices received by farmers (1977=100)	128	128	129	126	130	134	139	133	139
Livestock & products	148	150	144	146	148	149	156	153	153
Crops	106	105	110	113	111	119	121	112	125
Prices paid by farmers, (1977=100)									
Production items	147	148	150	147	152	155	153	153	153
Commodities & services, interest, taxes, & wages	162	164	165	162	165	168	169	168	168
Cash receipts (\$ bil) 1/	140	136	138	138	152	140	151	136	145-150
Livestock (\$ bil)	72	74	80	76	76	76	80	76	76-78
Crops (\$ bil)	68	62	58	61	76	64	72	60	68-70
Market basket (1982-84=100)									
Retail cost	112	112	112	112	114	--	--	--	--
Farm value	99	99	95	97	96	--	--	--	--
Spread	118	119	122	119	123	--	--	--	--
Farm value/retail cost (%)	31	31	30	30	30	--	--	--	--
Retail prices (1982-84=100)									
Food	113	114	114	114	116	117	119	119	118
At home	112	112	112	112	114	115	117	117	116
Away-from home	116	118	119	117	120	121	122	123	121
Agricultural exports (\$ bil) 2/	6.5	6.9	8.5	27.9	9.4	8.0	7.6	9.0	33.5
Agricultural imports (\$ bil) 2/	5.3	4.8	5.2	20.6	5.8	5.0	5.0	5.0	21.0
Production: *									
Red meat (mil lb)	9,240	9,624	10,096	38,442	9,665	9,663	9,930	9,993	39,252
Poultry (mil lb)	4,932	5,195	5,112	19,772	4,986	5,245	5,260	5,110	20,601
Eggs (mil doz)	1,438	1,439	1,479	5,797	1,464	1,415	1,400	1,430	5,709
Milk (bil lb)	37.4	35.5	34.7	142.5	36.1	37.8	35.5	34.4	143.8
Consumption, per capita:									
Red meat and poultry (lb)	51.9	53.2	56.2	212.7	53.5	54.3	55.3	56.6	219.7
Corn beginning stocks (mil bu) 3/	8,248.2	6,332.2	4,881.7	4,881.7	9,768.5	7,635.2	5,833.0	--	--
Corn use (mil bu) 3/	1,916.5	1,451.0	2,177.9	7,409.8	2,134.2	1,804.3	--	--	--
Prices: 4/									
Choice steers--Omaha (\$/cwt)	68.60	65.04	64.31	64.60	68.28	72.81	65-69	66-72	68-71
Barrows and gilts--7 mkts. (\$/cwt)	56.18	58.97	43.51	51.69	44.74	45.90	43-47	37-43	42-45
Broilers--12-city (cts/lb)	48.2	48.7	42.5	47.4	45.4	55.2	56-60	49-55	51-54
Eggs--NY Gr. A large (cts/doz)	58.9	63.5	59.2	61.6	55.0	53.2	64-68	67-73	60-63
Milk--at plant (\$/cut)	12.07	12.30	12.83	12.51	12.23	11.43	11.60-12.00	12.25-13.25	11.85-12.25
Wheat--Kansas City HRW (\$/bu)	2.94	2.65	2.86	2.72	3.20	3.38	--	--	--
Corn--Chicago (\$/bu)	1.82	1.68	1.74	1.64	1.95	2.29	--	--	--
Soybeans--Chicago (\$/bu)	5.37	5.16	5.36	5.19	6.14	7.01	--	--	--
Cotton--Avg. spot mkt. (cts/lb)	64.7	73.5	63.7	64.3	59.1	61.5	--	--	--
	1980	1981	1982	1983	1984	1985	1986	1987 P	1988 F
Gross cash income (\$ bil)	143.3	146.0	150.6	150.4	155.1	156.9	152.0	159	162-167
Gross cash expenses (\$ bil)	109.1	113.2	112.5	113.3	116.3	109.6	100.1	103	104-107
Net cash income (\$ bil)	34.2	32.8	38.1	37.1	38.8	47.3	52.0	56	53-59
Net farm income (\$ bil)	16.1	26.9	23.5	12.7	32.0	32.3	37.5	46	40-45
Farm real estate values (1977=100) 5/	145	158	157	148	146	128	112	103	106

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Dec.-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports and domestic disappearance. 4/ Simple averages. 5/ Nominal values as of February 1. P = preliminary. F = forecast. \* = commercial production. -- = not available.

# U.S. and Foreign Economic Data

Table 2.—U.S. Gross National Product & Related Data

	Annual			1987				1988
	1985	1986	1987	I	II	III	IV	I R
	\$ billion (quarterly data seasonally adjusted at annual rates)							
Gross national product	4,010.3	4,235.0	4,488.5	4,377.7	4,445.1	4,524.0	4,607.4	4,665.1
Personal consumption expenditures	2,629.4	2,799.8	2,967.8	2,893.8	2,943.7	3,011.3	3,022.6	3,068.3
Durable goods	368.7	402.4	413.7	396.1	409.0	436.8	413.0	424.0
Nondurable goods	913.1	939.4	982.9	969.9	982.1	986.4	993.1	998.4
Clothing & shoes	157.2	167.5	177.0	174.0	175.8	178.7	179.6	178.7
Food & beverages	472.8	497.8	515.8	514.8	515.0	514.0	519.3	523.7
Services	1,347.5	1,458.0	1,571.2	1,527.7	1,552.6	1,588.1	1,616.5	1,645.9
Gross private domestic investment	641.6	671.0	717.5	699.9	702.6	707.4	760.2	762.7
Fixed investment	631.6	655.2	671.5	648.2	662.3	684.5	690.8	704.9
Change in business inventories	10.0	15.7	46.1	51.6	40.3	22.9	69.4	57.8
Net exports of goods & services	-79.2	-105.5	-119.6	-112.2	-118.4	-123.7	-124.3	-111.1
Government purchases of goods & services	818.6	869.7	922.8	896.2	917.1	929.0	948.8	945.1
	1982 \$ billion (quarterly data seasonally adjusted at annual rates)							
Gross national product	3,607.5	3,713.3	3,821.0	3,772.2	3,795.3	3,835.9	3,880.8	3,915.4
Personal consumption expenditures	2,352.6	2,450.5	2,497.2	2,475.9	2,487.5	2,520.7	2,504.6	2,527.9
Durable goods	352.7	383.5	388.2	375.9	385.4	406.9	384.5	394.7
Nondurable goods	849.5	877.2	878.1	883.2	879.0	875.7	874.6	878.1
Clothing & shoes	147.9	158.0	159.5	160.4	157.3	161.7	158.6	158.0
Food & beverages	436.5	444.9	441.2	447.5	441.6	437.1	438.6	441.6
Services	1,150.4	1,189.8	1,230.9	1,216.9	1,223.1	1,238.1	1,245.6	1,255.1
Gross private domestic investment	636.1	654.0	687.6	671.8	673.7	681.9	723.1	741.8
Fixed investment	628.7	640.2	644.7	624.2	634.7	657.3	662.6	680.8
Change in business inventories	7.4	13.8	42.9	47.6	39.0	24.6	60.5	61.0
Net exports of goods & services	-108.2	-145.8	-135.5	-135.2	-132.7	-138.4	-135.8	-120.3
Government purchases of goods & services	726.9	754.5	771.7	759.6	766.7	771.7	788.9	766.0
GNP implicit price deflator % change	3.2	2.6	3.0	4.2	3.5	2.8	2.7	1.4
Disposable personal income (\$ bil)	2,841.1	3,022.1	3,181.7	3,125.9	3,130.6	3,195.3	3,275.0	3,322.6
Disposable per. income (1982 \$ bil)	2,542.2	2,645.1	2,677.2	2,674.6	2,645.5	2,674.7	2,713.8	2,737.4
Per capita disposable per. income (\$)	11,872	12,508	13,050	12,865	12,858	13,090	13,384	13,546
Per capita dis. per. income (1982 \$)	10,622	10,947	10,980	11,008	10,865	10,958	11,090	11,160
U.S. population, total, incl. military abroad (mil)	239.3	241.6	243.9	243.1	243.6	244.2	244.8	245.4
Civilian population (mil)	237.0	239.4	241.7	240.8	241.4	242.0	242.6	243.1
	Annual			1987		1988		
	1985	1986	1987	May	Feb	Mar	Apr	May
	Monthly data seasonally adjusted							
Industrial production (1977=100)	123.7	125.1	129.8	128.2	134.4	134.7	135.5	136.0
Leading economic indicators (1967=100)	168.6	179.3	189.9	188.6	191.5	191.8	192.8	192.6
Civilian employment (mil. persons)	107.2	109.6	112.4	112.3	114.4	114.1	114.7	114.2
Civilian unemployment rate (%)	7.2	7.0	6.2	6.3	5.7	5.6	5.4	5.6
Personal income (\$ bil annual rate)	3,327.0	3,534.3	3,746.5	3,708.5	3,891.1	3,936.7	3,940.8	3,954.1
Money stock-M2 (daily avg) (\$bil) 1/	2,562.6	2,807.8	2,901.0	2,849.1	2,946.1	2,967.6	2,991.8	3,003.9
Three-month Treasury bill rate (%)	7.48	5.98	5.82	5.75	5.69	5.69	5.92	6.27
Aaa corporate bond yield (Moody's) (%)	11.37	9.02	9.38	9.33	9.40	9.39	9.67	9.90
Housing starts (thou) 2/	1,742	1,805	1,621	1,599	1,519	1,529	1,576	1,384
Auto sales at retail, total (mil)	11.0	11.4	10.3	9.6	11.0	10.7	10.5	10.2
Business inventory/sales ratio	1.55	1.54	1.51	1.51	1.53	1.50	1.51	--
Sales of all retail stores (\$ bil)	115.0	121.2	125.5	124.8	130.1	132.3	131.7 P	131.9
Nondurable goods stores (\$ bil)	71.8	73.9	76.9	79.1	80.4	81.8	81.4 P	81.8
Food stores (\$ bil)	23.7	24.6	25.3	26.2	26.6	27.0	27.0 P	27.4
Eating & drinking places (\$ bil)	11.1	12.1	12.7	12.2	12.6	12.7	12.6 P	12.5
Apparel & accessory stores (\$ bil)	6.2	6.7	7.1	6.5	6.5	6.7	6.6 P	6.7

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. -- = not available.

Information contact: James Malley (202) 786-1782.

Table 3.—Foreign Economic Growth, Inflation, & Export Earnings

	Average 1970-74	Average 1975-79	1980	1981	1982	1983	1984	1985	1986	1987 P	1988 F	1989 F
	Annual percent change											
Total foreign												
Real GNP	5.5	3.7	2.6	1.6	1.7	2.0	3.2	3.0	2.7	2.9	2.7	2.8
CPI	10.2	14.0	16.9	15.6	14.4	18.4	22.5	21.6	11.4	16.6	25.2	19.0
Export earnings	27.5	14.6	22.2	-2.7	-7.0	-2.6	5.6	1.7	11.9	18.7	9.6	8.4
Developed less U.S.												
Real GNP	4.8	3.1	2.4	1.4	1.1	1.9	3.4	3.3	2.4	2.8	2.4	2.2
CPI	8.4	9.4	10.9	9.6	8.0	6.0	5.1	4.7	2.7	2.6	2.8	3.3
Export earnings	23.9	14.9	17.0	-3.3	-4.3	-0.5	6.3	4.6	19.4	17.6	9.9	8.1
Centrally planned												
Real GNP	5.1	3.5	1.5	2.1	2.7	3.4	3.7	2.9	3.9	3.5	3.8	3.7
Export earnings	19.4	16.1	16.5	3.4	6.0	8.2	1.5	-5.1	7.3	6.7	7.7	8.0
Latin America												
Real GNP	7.4	5.1	5.3	0.7	-0.5	-2.7	3.3	3.6	3.7	2.3	1.2	2.3
CPI	23.5	53.7	61.3	64.9	72.6	126.2	174.1	179.4	86.1	139.1	231.5	160.9
Export earnings	28.1	12.8	30.1	5.3	-10.0	-1.0	6.7	-5.9	-13.8	13.3	5.2	6.5
Africa & Middle East												
Real GNP	8.9	6.4	1.3	0.0	1.4	0.1	1.1	0.0	-1.2	0.1	1.7	3.2
CPI	8.7	16.4	24.6	17.3	12.9	16.7	19.4	11.2	12.0	14.9	12.7	11.9
Export earnings	49.6	43.2	37.9	-9.2	-19.7	-17.5	-7.0	-6.7	-14.8	10.6	10.3	7.6
Asia												
Real GNP	6.0	6.8	6.3	6.6	3.6	6.6	5.4	4.0	5.8	6.0	5.2	5.3
CPI	13.0	8.4	16.4	14.1	7.3	7.7	8.5	5.2	4.4	5.7	6.1	6.8
Export earnings	30.1	19.4	27.8	6.8	-0.3	3.4	13.7	-1.0	5.8	28.0	16.5	11.8

P = preliminary. F = forecast.

Information contact: Timothy Baxter (202) 786-1706.

## Farm Prices

Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average

	Annual			1987	1988					
	1985	1986	1987	June	Jan	Feb	Mar	Apr	May R	June P
	1977=100									
Prices received										
All farm products	128	123	127	130	131	130	130	130	134	139
All crops	120	107	106	109	115	109	110	111	117	129
Food grains	133	109	103	96	116	120	118	119	125	143
Feed grains & hay	122	98	85	90	93	96	97	100	105	126
Feed grains	122	96	81	86	90	93	94	95	98	124
Cotton	93	91	98	109	100	94	95	98	97	100
Tobacco	153	138	129	127	134	134	134	126	126	126
Oil-bearing crops	84	77	79	83	87	89	91	95	103	123
Fruit, all	180	170	182	196	170	166	163	160	195	182
Fresh market 1/	192	178	193	209	178	174	170	166	206	192
Commercial vegetables	129	130	144	126	199	129	136	132	115	121
Fresh market	122	123	147	123	223	127	136	131	108	116
Potatoes & dry beans	124	114	127	165	93	94	102	105	118	113
Livestock & products	136	138	146	149	147	149	148	148	151	147
Meat animals	142	145	163	172	166	172	171	172	176	169
Dairy products	131	129	129	123	129	127	123	119	117	116
Poultry & eggs	119	128	107	103	101	95	101	98	106	114
Prices paid										
Commodities & services, interest, taxes, & wage rates	163	159	162	--	165	--	--	168	--	--
Production items	151	144	147	--	152	--	--	155	--	--
Feed	116	108	103	--	112	--	--	112	--	--
Feeder livestock	154	153	179	--	193	--	--	198	--	--
Seed	153	148	148	--	149	--	--	150	--	--
Fertilizer	135	124	118	--	121	--	--	132	--	--
Agricultural chemicals	128	127	124	--	123	--	--	128	--	--
Fuels & energy	201	162	161	--	161	--	--	163	--	--
Farm & motor supplies	146	144	144	--	144	--	--	146	--	--
Autos & trucks	193	198	208	--	213	--	--	215	--	--
Tractors & self-propelled machinery	178	174	174	--	176	--	--	179	--	--
Other machinery	183	184	185	--	188	--	--	200	--	--
Building & fencing	136	136	137	--	138	--	--	138	--	--
Farm services & cash rent	150	145	146	--	150	--	--	150	--	--
Interest payable per acre on farm real estate debt	237	219	207	--	193	--	--	193	--	--
Taxes payable per acre on farm real estate	133	134	136	--	138	--	--	138	--	--
Wage rates (seasonally adjusted)	154	160	167	--	162	--	--	162	--	--
Production items, interest, taxes, & wage rates	157	150	152	--	155	--	--	158	--	--
Ratio, prices received to prices paid 2/	79	77	78	80	79	79	79	77	80	83
Prices received (1910-14=100)	585	561	578	593	599	592	593	594	614	633
Prices paid, etc. (Parity Index) (1910-14=100)	1,120	1,096	1,115	--	1,138	--	--	1,154	--	--
Parity ratio (1910-14=100) 2/	52	51	52	--	53	--	--	51	--	--

1/ Fresh market for noncitrus; fresh market and processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio derived using the most recent prices paid index. Prices paid data will be published in January, April, July, and October. R = revised. P = preliminary. -- = not available.

Information contact: National Agricultural Statistics Service (202) 447-5446.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1987	1988					
	1985	1986	1987	June	Jan	Feb	Mar	Apr	May R	June P
<b>Crops</b>										
All wheat (\$/bu)	3.08	2.42	2.55	2.44	2.75	2.79	2.74	2.79	2.99	3.50
Rice, rough (\$/cwt)	7.85	5.04	4.49	3.62	7.70	8.97	8.79	8.33	7.71	7.31
Corn (\$/bu)	2.49	1.96	1.56	1.69	1.77	1.83	1.86	1.88	1.95	2.43
Sorghum (\$/cwt)	3.97	3.11	2.56	2.79	2.75	2.88	2.92	2.94	2.91	3.83
All hay, baled (\$/ton)	69.93	61.64	62.91	63.20	62.80	65.50	66.20	72.90	80.90	76.80
Soybeans (\$/bu)	5.42	5.00	5.07	5.36	5.73	5.97	6.06	6.40	6.99	8.56
Cotton, Upland (cts/lb)	56.1	54.8	59.4	66.2	60.6	56.8	57.7	59.4	58.9	60.4
Potatoes (\$/cwt)	3.92	5.03	4.47	6.98	3.75	3.73	4.00	4.09	4.66	4.29
Lettuce (\$/cwt)	10.90	11.90	14.80	8.91	35.60	11.10	13.80	9.33	7.89	12.40
Tomatoes (\$/cwt)	24.10	25.10	25.10	26.90	31.50	19.40	28.60	29.90	22.60	23.20
Onions (\$/cwt)	9.08	10.90	11.40	16.80	15.30	13.80	12.50	15.10	9.10	9.75
Dry edible beans (\$/cwt)	17.60	19.10	15.50	18.60	13.40	14.40	16.30	16.90	18.40	20.00
Apples for fresh use (cts/lb)	14.7	19.8	19.4	24.6	11.5	12.8	12.8	11.1	10.8	11.0
Pears for fresh use (\$/ton)	349.00	372.00	217.00	368.00	135.00	193.00	219.00	229.00	340.00	526.00
Oranges, all uses (\$/box) 2/	7.41	4.42	4.55	6.47	6.19	6.24	5.99	6.42	7.87	7.76
Grapefruit, all uses (\$/box) 2/	4.01	4.29	5.00	4.34	5.34	5.25	4.86	4.50	3.96	2.89
<b>Livestock</b>										
Beef cattle (\$/cwt)	54.00	52.80	61.40	62.50	65.40	67.40	68.30	69.00	69.30	65.20
Calves (\$/cwt)	62.40	60.90	78.10	78.80	86.20	92.60	93.50	93.20	93.40	86.70
Hogs (\$/cwt)	43.90	50.10	50.90	59.20	43.00	45.80	42.20	41.90	46.30	47.40
Lambs (\$/cwt)	68.10	69.10	77.90	83.50	80.70	80.40	80.20	74.80	72.60	62.10
All milk, sold to plants (\$/cwt)	12.70	12.50	12.50	11.90	12.50	12.30	11.90	11.60	11.40	11.30
Milk, manuf. grade (\$/cwt)	11.78	11.55	11.40	10.90	11.30	11.00	10.70	10.60	10.40	10.30
Broilers (cts/lb)	30.1	34.5	28.5	27.6	27.1	25.7	27.5	28.0	33.5	36.7
Eggs (cts/doz) 3/	57.4	61.2	53.8	50.0	49.3	46.9	50.8	45.5	43.1	45.7
Turkeys (cts/lb)	47.2	44.4	34.2	34.1	31.8	29.0	28.2	28.4	29.7	31.6
Wool (cts/lb) 4/	63.3	66.8	91.7	108.0	75.2	93.3	118.0	153.0	165.0	161.0

1/ Calendar year averages, except for potatoes, dry edible beans, apples, oranges, and grapefruit, which are crop years.  
 2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs and eggs sold at retail.  
 4/ Average local market price, excluding incentive payments. R = revised. P = preliminary.

Information contact: National Agricultural Statistics Service (202) 447-5446.

## Producer and Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual	1987				1988				
	1987	May	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Consumer price index, all items	113.6	113.1	115.3	115.4	115.4	115.7	116.0	116.5	117.1	117.5
Consumer price index, less food	113.6	113.0	115.5	115.7	115.5	115.7	116.0	116.6	117.2	117.6
<b>All food</b>										
Food away from home	117.0	116.4	118.3	118.6	118.9	119.3	119.7	120.2	120.7	121.0
Food at home	111.9	112.0	112.4	112.1	112.8	114.1	113.9	113.9	114.6	115.1
Meats 1/	109.6	108.7	111.8	111.1	110.4	110.1	110.2	110.9	110.8	111.7
Beef & veal	106.3	106.5	107.8	108.6	108.5	107.7	108.5	109.8	110.5	111.7
Pork	115.9	113.3	119.0	115.5	113.1	113.4	112.3	112.6	111.4	111.7
Poultry	112.6	113.2	111.8	107.9	107.8	108.9	108.4	109.1	110.2	114.0
Fish	129.9	128.9	131.4	132.3	133.3	137.2	137.0	136.0	139.3	136.1
Eggs	91.5	88.5	91.4	93.9	85.5	90.1	85.5	87.9	85.0	81.8
Dairy products 2/	105.9	105.7	106.9	106.9	106.7	107.4	107.3	107.2	107.1	107.4
Fats & oils 3/	108.1	108.5	107.4	108.0	107.7	108.5	109.5	110.3	110.3	111.2
Fresh fruit	132.0	138.7	135.7	125.8	126.3	130.7	132.6	133.8	139.9	146.6
Processed fruit	110.6	111.0	111.5	111.6	112.3	115.1	118.0	119.4	122.1	121.8
Fresh vegetables	121.6	123.6	112.5	121.2	140.2	143.9	133.7	125.6	127.5	124.5
Potatoes	116.0	127.1	101.9	100.6	103.8	104.6	106.2	108.5	111.2	114.7
Processed vegetables	107.1	106.9	107.5	107.3	107.3	107.2	107.6	107.9	108.4	108.6
Cereals & bakery products	114.8	114.6	115.6	116.2	116.8	118.1	118.7	118.9	119.8	120.3
Sugar & sweets	111.0	110.8	111.6	111.4	111.0	112.2	112.2	112.6	112.3	112.5
Beverages, nonalcoholic	107.5	108.0	106.7	105.0	104.8	106.9	107.7	107.7	107.8	107.5
Apparel commodities less footwear	109.6	110.1	115.2	115.0	111.7	109.0	108.8	113.7	116.6	115.7
Footwear	105.1	106.5	107.3	108.0	107.2	106.1	105.8	107.3	109.4	109.7
Tobacco & smoking products	133.6	131.8	136.3	136.5	137.0	140.8	142.2	142.8	142.9	143.2
Beverages, alcoholic	114.1	113.6	115.2	115.4	115.4	115.8	116.8	117.4	118.0	118.2

1/ Beef, veal, lamb, pork, and processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ralph Parlett (202) 786-1870.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1987		1988				
	1985	1986	1987	May	Dec	Jan R	Feb	Mar	Apr	May
	1982=100									
Finished goods 1/	104.7	103.2	105.4	105.4	105.8	106.3	105.9	106.2	106.9	107.5
Consumer foods	104.6	107.2	109.5	110.6	108.9	110.5	109.4	110.0	110.2	111.3
Fresh fruit	108.1	112.9	111.4	108.4	121.2	109.2	104.2	104.2	102.7	103.6
fresh & dried vegetables	99.4	97.8	103.8	102.3	109.0	126.3	96.4	96.3	98.4	96.7
Dried fruit	88.7	91.9	95.0	94.0	99.0	97.8	97.8	97.8	97.9	97.9
Canned fruit & juice	113.8	111.0	115.4	114.6	117.2	118.9	119.4	119.5	119.7	119.8
Frozen fruit & juice	118.5	103.0	113.4	112.8	124.4	125.4	130.2	131.1	130.1	130.1
Fresh veg. excl. potatoes	100.3	99.3	99.0	94.4	112.0	135.9	96.8	94.2	98.5	88.5
Canned veg. & juices	101.9	101.2	103.5	103.4	102.6	103.2	103.3	103.6	103.2	103.2
Frozen vegetables	106.5	106.6	107.3	107.5	106.7	107.0	106.5	107.2	106.7	106.4
Potatoes	101.2	104.0	120.5	137.5	110.9	107.5	100.2	108.0	97.6	124.2
Eggs	95.6	99.5	87.6	84.4	70.6	76.5	73.8	79.7	66.7	68.0
Bakery products	113.9	116.6	118.5	117.4	121.4	122.4	122.8	123.1	123.5	124.3
Meats	90.9	93.9	100.3	105.9	93.7	98.4	97.6	98.4	98.6	101.8
Beef & veal	90.3	88.1	95.4	102.5	92.9	96.5	96.3	100.9	101.0	102.4
Pork	89.1	99.9	104.7	111.5	87.5	97.8	95.7	91.5	92.0	100.0
Processed poultry	110.4	116.7	103.5	107.3	96.7	97.9	93.8	98.7	100.6	107.4
Fish	114.6	124.9	141.9	141.4	156.3	152.0	158.2	160.1	159.1	159.8
Dairy products	100.2	99.9	101.7	100.9	101.7	101.0	100.4	100.0	99.9	100.1
Processed fruits & vegetables	107.9	104.9	108.6	108.4	110.1	110.9	111.5	111.9	111.6	111.5
Shortening & cooking oils	123.9	103.3	104.0	103.8	108.9	114.2	114.4	114.7	117.5	118.5
Consumer finished goods less foods	103.3	98.5	100.7	100.3	101.6	101.5	101.3	101.4	102.5	102.9
Beverages, alcoholic	107.6	110.1	110.4	111.0	110.3	110.5	111.3	112.2	112.1	111.6
Soft drinks	107.7	109.5	111.9	112.2	112.8	113.0	113.3	113.9	114.1	114.0
Apparel	105.0	106.3	108.4	107.7	109.9	110.3	110.4	110.7	110.9	111.2
Footwear	104.7	106.8	109.4	108.9	111.4	112.7	114.2	114.3	114.4	114.3
Tobacco products	132.5	142.4	154.7	150.9	163.3	166.6	166.5	166.5	166.5	166.8
Intermediate materials 2/	102.6	99.1	101.5	100.9	103.6	104.2	104.1	104.6	105.5	106.2
Materials for food manufacturing	101.4	98.4	100.8	102.7	99.8	101.9	101.9	101.7	102.8	104.2
Flour	99.8	94.5	92.9	96.6	93.3	94.4	97.5	94.1	96.8	97.3
Refined sugar 3/	102.8	103.2	106.5	106.3	106.5	105.7	106.7	106.7	107.4	107.1
Crude vegetable oils	137.5	84.8	84.0	90.8	92.9	104.9	105.9	101.2	109.9	114.1
Crude materials 4/	95.8	87.7	93.7	94.8	94.4	93.7	94.6	94.1	95.7	97.1
Foodstuffs & feedstuffs	94.8	93.2	96.2	101.6	95.9	97.2	99.6	99.7	101.2	104.5
Fruits & vegetables 5/	102.6	103.9	106.6	104.5	113.8	118.2	99.3	99.3	99.8	99.3
Grains	96.1	79.2	71.1	79.0	78.9	77.5	83.5	80.6	82.3	82.9
Livestock	89.1	91.8	101.9	109.6	98.1	99.3	105.0	105.7	107.1	111.1
Poultry, live	117.8	129.6	101.2	112.8	87.7	99.1	86.9	96.9	97.6	112.2
Fibers, plant & animal	97.4	88.3	106.5	108.7	100.5	100.7	97.8	103.2	103.6	103.7
Fluid milk	93.6	90.9	91.9	89.4	91.5	90.5	89.1	86.7	86.7	85.3
Oilseeds	94.4	91.4	99.3	104.2	106.5	110.0	111.1	112.6	121.5	127.5
Tobacco, leaf	101.2	89.7	85.8	84.6	88.5	87.2	87.2	87.2	87.2	82.0
Sugar, raw cane	104.6	104.9	110.3	110.7	109.7	109.7	111.4	111.4	111.9	111.8
All commodities	103.1	100.1	102.8	102.6	104.2	104.6	104.6	104.9	105.8	106.5
Industrial commodities	103.7	99.9	102.6	101.9	104.2	104.4	104.4	104.7	105.6	106.1
All foods 6/	103.9	105.5	107.8	109.0	107.3	109.2	108.1	108.6	108.9	110.1
Farm products & processed foods & feeds	100.6	101.2	103.7	105.9	104.0	105.3	105.2	105.7	106.5	108.1
Farm products	95.1	92.9	95.4	99.9	95.7	97.3	97.5	97.7	99.0	101.7
Processed foods & feeds 6/	103.5	105.4	107.9	109.1	108.2	109.3	109.2	109.7	110.3	111.4
Cereal & bakery products	110.2	111.0	112.6	112.0	116.7	118.2	119.6	119.6	120.2	120.3
Sugar & confectionery	107.9	109.6	112.7	112.8	113.0	112.5	112.9	113.2	113.3	113.6
Beverages	107.7	114.5	112.5	113.2	112.2	112.5	112.9	113.8	114.2	114.0

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types and sizes of refined sugar. 4/ Products entering market for the first time which have not been manufactured at that point. 5/ Fresh and dried. 6/ Includes all raw, intermediate, and processed foods (excludes soft drinks, alcoholic beverages, and manufactured animal feeds). R = revised.

Information contact: Bureau of Labor Statistics (202) 523-1913.

# Farm-Retail Price Spreads

Table 8. -- Farm-Retail Price Spreads

	Annual				1987		1988					
	1984	1985	1986	1987	May	Dec	Jan	Feb	Mar	Apr	May	
<b>Market basket 1/</b>												
Retail cost (1982-84=100)	102.9	104.1	106.3	111.6	111.7	112.7	113.9	113.5	113.5	114.2	114.9	
Farm value (1982-84=100)	103.5	96.2	94.9	97.1	99.6	96.1	95.8	96.1	96.4	96.6	99.1	
Farm-retail spread (1982-84=100)	102.6	108.3	112.5	119.4	118.3	122.8	123.6	122.6	122.7	123.7	123.5	
Farm value-retail cost (%)	35.2	32.4	31.2	30.5	31.2	29.2	29.4	29.7	29.6	29.6	30.2	
<b>Meat products</b>												
Retail cost (1982-84=100)	99.8	98.9	102.0	109.6	108.7	110.4	110.1	110.2	110.9	110.8	111.7	
Farm value (1982-84=100)	99.4	91.3	94.3	101.2	106.9	93.1	93.3	99.4	100.2	102.0	103.2	
Farm-retail spread (1982-84=100)	100.3	106.7	109.8	118.3	110.6	128.1	127.4	121.3	121.9	119.9	120.4	
Farm value-retail cost (%)	50.4	46.8	46.8	46.7	49.8	42.7	42.9	45.7	45.8	46.6	46.8	
<b>Dairy products</b>												
Retail cost (1982-84=100)	101.3	103.2	103.3	105.9	105.7	106.7	107.4	107.3	107.2	107.1	107.4	
Farm value (1982-84=100)	99.2	95.2	92.6	93.3	91.1	92.5	92.4	90.6	89.3	88.1	86.7	
Farm-retail spread (1982-84=100)	103.2	110.5	113.3	117.5	119.2	119.8	121.3	122.7	123.7	124.6	126.5	
Farm value-retail cost (%)	47.0	44.2	43.0	42.3	41.3	41.6	41.3	40.5	40.0	39.5	38.7	
<b>Poultry</b>												
Retail cost (1982-84=100)	107.3	106.2	114.2	112.6	113.2	107.8	108.9	108.4	109.1	110.2	114.0	
Farm value (1982-84=100)	112.6	105.9	115.1	93.8	98.3	85.1	88.8	83.6	88.2	89.7	105.1	
Farm-retail spread (1982-84=100)	101.1	106.6	113.3	134.2	130.4	133.9	132.0	137.0	133.1	133.9	124.2	
Farm value-retail cost (%)	56.2	53.3	53.9	44.6	46.5	42.2	43.6	41.3	43.3	43.5	49.4	
<b>Eggs</b>												
Retail cost (1982-84=100)	109.1	91.0	97.2	91.5	88.5	85.5	90.1	85.5	87.9	85.0	81.8	
Farm value (1982-84=100)	110.1	85.7	92.4	76.8	68.9	66.7	68.2	64.6	70.8	61.9	56.6	
Farm-retail spread (1982-84=100)	107.4	100.4	106.0	117.9	123.7	119.2	129.3	123.1	118.7	126.5	127.1	
Farm value-retail cost (%)	64.8	60.5	61.0	53.9	50.0	50.2	48.7	48.5	51.7	46.8	44.4	
<b>Cereal &amp; bakery products</b>												
Retail cost (1982-84=100)	103.9	107.9	110.9	114.8	114.6	116.8	118.1	118.7	118.9	119.8	120.3	
Farm value (1982-84=100)	102.9	96.3	76.3	71.0	71.8	76.4	98.2	105.6	102.1	101.3	104.8	
Farm-retail spread (1982-84=100)	104.1	109.8	115.7	120.9	120.6	122.4	120.9	120.5	121.2	122.4	122.5	
Farm value-retail cost (%)	12.1	10.7	8.4	7.6	7.7	8.0	10.2	10.9	10.5	10.4	10.7	
<b>Fresh fruits</b>												
Retail cost (1982-84=100)	106.6	118.4	120.4	135.6	143.8	128.5	133.6	133.7	135.2	141.8	149.8	
Farm value (1982-84=100)	113.7	110.8	103.8	113.9	110.1	130.8	110.6	104.4	102.2	89.8	122.9	
Farm-retail spread (1982-84=100)	103.3	121.8	128.0	145.7	159.4	127.4	144.2	147.2	150.5	165.8	162.2	
Farm value-retail cost (%)	33.7	29.6	27.4	26.5	24.2	32.2	26.2	24.7	23.9	20.0	25.9	
<b>Fresh vegetables</b>												
Retail cost (1982-84=100)	108.2	103.5	107.7	121.6	123.6	140.2	143.9	133.7	125.6	127.5	124.5	
Farm value (1982-84=100)	108.3	93.1	90.0	112.0	115.0	113.8	122.7	100.4	97.4	104.2	89.4	
Farm-retail spread (1982-84=100)	108.2	108.9	116.8	126.5	128.0	153.8	154.9	150.8	140.1	139.5	142.6	
Farm value-retail cost (%)	34.0	30.5	28.4	31.3	31.6	27.6	28.9	25.5	26.3	27.7	24.4	
<b>Processed fruits &amp; vegetables</b>												
Retail cost (1982-84=100)	104.3	107.0	105.3	109.0	109.1	110.0	111.6	113.4	114.3	116.0	115.9	
Farm value (1982-84=100)	106.8	117.7	101.5	111.1	114.7	127.4	130.0	132.0	131.3	133.1	134.6	
Farm-retail spread (1982-84=100)	103.4	103.7	106.4	108.3	107.4	106.6	105.8	107.6	109.0	110.7	110.1	
Farm value-retail cost (%)	24.4	26.2	22.9	24.2	25.0	27.5	27.7	27.7	27.3	27.3	27.6	
<b>Fats &amp; oils</b>												
Retail cost (1982-84=100)	106.6	108.9	106.5	108.1	108.5	107.7	108.5	109.5	110.3	110.3	111.2	
Farm value (1982-84=100)	124.3	104.3	76.2	74.1	76.4	78.9	93.5	92.4	93.0	95.6	100.6	
Farm-retail spread (1982-84=100)	100.2	110.6	117.6	120.6	120.3	118.3	114.0	116.2	116.7	115.7	115.1	
Farm value-retail cost (%)	31.3	25.8	19.2	18.4	18.9	19.7	23.2	22.4	22.7	23.3	24.3	

	Annual				1987		1988					
	1984	1985	1986	1987	May	Dec	Jan	Feb	Mar	Apr	May	
<b>Beef, Choice</b>												
Retail price 2/ (cts/lb)	239.6	232.6	230.7	242.5	243.4	245.3	242.9	246.3	248.5	250.2	253.2	
Net carcass value 3/ (cts)	147.6	135.2	133.1	145.3	152.9	141.1	144.7	148.3	154.0	156.7	166.2	
Net farm value 4/ (cts)	140.0	126.8	124.4	137.9	150.9	134.6	136.6	143.2	148.6	152.4	158.6	
Farm-retail spread (cts)	99.6	105.8	106.3	104.6	92.5	110.7	106.3	103.1	99.9	97.7	94.6	
Carcass-retail spread 5/ (cts)	92.0	97.4	97.6	97.2	83.5	104.2	98.2	98.0	94.5	93.4	87.0	
Farm-carcass spread 6/ (cts)	7.6	8.4	8.7	7.4	9.0	6.5	8.1	5.1	5.5	4.3	7.6	
Farm value-retail price (%)	58	55	54	57	62	55	56	58	60	61	63	
<b>Pork</b>												
Retail price 2/ (cts/lb)	162.0	162.0	178.4	188.4	183.7	185.6	185.3	183.1	183.3	182.9	183.6	
Wholesale value 3/ (cts)	110.1	101.1	110.9	113.0	117.0	106.5	104.0	105.3	103.5	102.5	106.4	
Net farm value 4/ (cts)	77.4	71.4	82.4	82.7	89.3	66.2	71.3	75.5	68.6	67.2	76.1	
Farm-retail spread (cts)	84.6	90.6	96.0	105.7	94.4	119.4	114.0	107.6	114.7	115.7	107.5	
Wholesale-retail spread 5/ (cts)	51.9	60.9	67.5	75.4	66.7	79.1	81.3	77.8	79.8	80.4	77.2	
Farm-wholesale spread 6/ (cts)	32.7	29.7	28.5	30.3	27.7	40.3	32.7	29.8	34.9	35.3	30.3	
Farm value-retail price (%)	48	44	46	44	49	36	38	41	37	37	41	

1/ Retail costs are based on indexes of retail prices for domestically produced farm foods from the CPI-U published monthly by the Bureau of Labor Statistics. The farm value is the payment to farmers for quantity of farm product equivalent to retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale and may include marketing charges such as grading and packing for some commodities. The farm-retail spread, the difference between the retail price and the farm value, represents charges for assembling, processing, transporting, and distributing these foods. 2/ Estimated weighted average price of retail cuts from pork and choice yield grade 3 beef carcasses. Retail cut prices from BLS. 3/ Value of carcass quantity (beef) and wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat and bone byproducts. 4/ Market value to producer for quantity of live animal equivalent to 1 lb. of retail cuts minus value of byproducts. 5/ Represents charges for retailing and other marketing services such as fabricating, wholesaling, and in-city transportation. 6/ Represents charges made for livestock marketing, processing, and transportation to city where consumed.

Note: Annual historical data on farm-retail price spreads may be found in Food Cost Review, 1986, AER, NO. 574, ERS, USDA.

Information contacts: Denis Dunham (202) 786-1870; Ron Gustafson (202) 786-1286.

Table 9. -- Price Indexes of Food Marketing Costs

(See the June 1988 issue.)

Information contact: Denis Dunham (202) 786-1870

# Livestock and Products

Table 10.—U.S. Meat Supply & Use

Item	Beg. stocks	Pro- duc- tion 1/	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Civilian consumption		Primary market price 3/
								Total	Per capita 2/ Pounds	
Million pounds 4/										
<b>Beef</b>										
1985	472	23,728	2,071	26,271	328	51	420	25,473	78.8	58.37
1986	420	24,371	2,129	26,919	521	52	412	25,935	78.4	57.75
1987	412	23,566	2,269	26,247	604	52	386	25,205	73.4	64.60
1988 F	386	23,057	2,350	25,793	580	60	435	24,718	71.3	68-71
<b>Pork</b>										
1985	348	14,807	1,128	16,283	128	131	289	15,734	61.9	44.77
1986	289	14,063	1,122	15,474	86	132	248	15,008	58.4	51.19
1987	248	14,374	1,195	15,817	109	127	347	15,234	58.7	51.69
1988 F	347	15,695	1,275	17,317	125	140	330	16,256	63.8	42-45
<b>Veal</b>										
1985	14	515	20	549	4	1	11	533	1.8	62.42
1986	11	524	27	562	5	1	7	549	1.9	60.89
1987	7	429	24	460	7	1	4	448	1.5	78.05
1988 F	4	410	28	442	5	1	7	429	1.4	84-87
<b>Lamb and mutton</b>										
1985	7	358	36	401	1	2	13	385	1.4	68.61
1986	13	338	41	392	1	2	13	376	1.4	70.26
1987	13	315	44	372	1	2	8	360	1.3	78.09
1988 F	8	332	55	395	1	1	9	384	1.4	68-71
<b>Total red meat</b>										
1985	841	39,408	3,255	43,504	461	185	733	42,125	144.0	--
1986	733	39,296	3,319	43,349	613	187	679	41,868	140.2	--
1987	680	38,684	3,533	42,897	722	179	745	41,251	134.7	--
1988 F	745	39,494	3,708	43,947	711	202	781	42,253	138.0	--
<b>Broilers</b>										
1985	20	13,762	0	13,781	417	143	27	13,195	55.2	50.8
1986	27	14,316	0	14,342	566	149	24	13,603	56.3	56.9
1987	24	15,594	0	15,618	752	151	25	14,691	60.3	47.4
1988 F	25	16,248	0	16,273	723	140	25	15,385	62.5	51-54
<b>Mature chicken</b>										
1985	119	636	0	755	21	1	144	589	2.5	--
1986	144	627	0	771	16	3	163	589	2.4	--
1987	163	650	0	814	15	2	188	608	2.5	--
1988 F	188	664	0	852	20	4	150	678	2.8	--
<b>Turkeys</b>										
1985	125	2,942	0	3,067	27	7	150	2,884	12.0	75.5
1986	150	3,271	0	3,422	27	4	178	3,212	13.3	72.2
1987	178	3,828	0	4,006	33	4	282	3,686	15.1	57.8
1988 F	282	4,001	0	4,283	40	4	175	4,064	16.5	58-61
<b>Total poultry</b>										
1985	264	17,340	0	17,604	465	151	321	16,668	69.7	--
1986	321	18,215	0	18,535	609	156	365	17,405	72.0	--
1987	365	20,072	0	20,437	800	157	495	18,985	77.9	--
1988 F	495	20,913	0	21,408	783	148	350	20,127	81.8	--
<b>Red meat &amp; poultry</b>										
1985	1,105	56,748	3,255	61,108	926	336	1,054	58,792	213.6	--
1986	1,054	57,511	3,319	61,884	1,223	343	1,044	59,273	212.2	--
1987	1,045	58,756	3,533	63,334	1,522	336	1,240	60,236	212.6	--
1988 F	1,240	60,407	3,708	65,355	1,494	350	1,131	62,379	219.7	--

1/ Total including farm production for red meats and federally inspected plus non-federally inspected for poultry.  
 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was changed from .74 to .73 beginning in 1986.)  
 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb and mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats and certified ready-to-cook for poultry. F = forecast. -- = not available.

Information contacts: Ron Gustafson, Leland Southard, or Mark Weimar (202) 786-1285.



Table 11.—U.S. Egg Supply &amp; Use

	Beg. stocks	Pro-duction	Im-ports	Total supply	Ex-ports	Ship-ments	Hatch-ing use	Ending stocks	Consumption		Wholesale price*
									Total	Per capita	
Million dozen											
									No	Cts/doz	
1983	20.3	5,659.2	23.4	5,702.9	85.8	26.6	500.0	9.3	5,081.2	259.8	75.2
1984	9.3	5,708.3	32.0	5,749.5	58.2	27.8	529.7	11.1	5,122.8	259.4	80.9
1985	11.1	5,688.0	12.7	5,711.8	70.6	30.3	548.1	10.7	5,052.0	253.4	66.4
1986	10.7	5,705.0	13.7	5,729.3	101.6	28.0	566.8	10.4	5,022.5	249.5	71.1
1987	10.4	5,796.5	5.6	5,811.7	111.2	25.1	595.3	14.0	5,066.9	249.5	61.6
1988 F	14.4	5,709.0	4.0	5,727.4	120.7	24.0	614.2	10.0	4,958.5	241.8	58-64

\* Cartoned Grade A large eggs, New York. F = forecast.

Information contact: Robert Bishop (202) 786-1714.

Table 12.—U.S. Milk Supply & Use<sup>1</sup>

Calendar year	Pro-duction	Farm use	Commercial		Im-ports	Total commer- cial supply	CCC net re- movals	Commercial		All milk price 2/
			Farm market- ings	Beg. stocks				Ending stocks	Disap- pear- ance	
Billion pounds										
										\$/cwt
1981	132.8	2.3	130.5	5.8	2.3	138.5	12.9	5.4	120.3	13.77
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61
1983	139.7	2.4	137.3	4.6	2.6	144.5	16.8	5.2	122.5	13.58
1984	135.4	2.9	132.5	5.2	2.7	140.5	8.6	4.9	126.9	13.46
1985	143.1	2.5	140.7	4.9	2.8	148.4	13.2	4.6	130.6	12.75
1986	143.4	2.4	141.0	4.6	2.7	148.3	10.6	4.2	133.5	12.51
1987	142.5	2.2	140.3	4.2	2.5	146.9	6.7	4.6	135.6	12.54
1988 F	143.8	2.2	141.6	4.6	2.5	147.7	7.7	4.5	135.5	12.00

<sup>1</sup> Milkfat basis. Totals may not add because of rounding. <sup>2</sup> Delivered to plants and dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry &amp; Eggs

	Annual			1987		1988				
	1985	1986	1987	May	Dec.	Jan	Feb	Mar	Apr	May
Broilers, federally inspected slaughter, certified (mil lb) wholesale price	13,569.2	14,265.6	15,502.5	1,261.0	1,336.8	1,294.0	1,299.6	1,402.6	1,313.5	1,360.8
12-city, (cts/lb)	50.8	56.9	47.4	50.5	39.8	43.9	44.9	48.4	48.7	56.3
Price of grower feed (\$/ton)	197	187	224	181	197	194	198	196	181	181
Broiler-feed price ratio 1/	3.1	3.7	3.7	3.3	2.5	2.8	2.6	2.8	3.1	3.7
Stocks beginning of period (mil lb)	19.7	26.6	23.9	26.9	24.1	24.8	31.0	32.4	35.5	40.8
Broiler-type chicks hatched (mil) 2/	4,803.8	5,013.3	535.1	473.8	469.7	464.5	431.7	482.8	470.2	485.5
Turkeys										
Federally inspected slaughter, certified (mil lb)	2,800	3,133	3,717	274.1	297.0	254.6	265.4	316.6	274.6	327.7
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts/lb)	75.5	72.2	57.8	55.3	66.5	52.8	47.1	47.0	46.9	49.3
Price of turkey grower feed (\$/ton)	212	215	213	209	213	227	223	226	210	212
Turkey-feed price ratio 1/	4.5	4.1	3.9	3.4	3.6	2.8	2.6	2.5	2.7	2.8
Stocks beginning of period (mil lb)	125.3	150.2	178.2	250.8	321.5	282.4	299.3	335.1	353.3	384.4
Poultz placed in U.S. (mil)	197.8	225.4	26.5	26.6	20.0	22.3	23.1	25.0	24.6	25.3
Eggs										
Farm production (mil)	68,256	68,459	69,558	5,853	6,016	5,980	5,607	5,964	5,656	5,770
Average number of layers (mil)	277	278	280	278	284	283	282	278	275	272
Rate of lay (eggs per layer on farms)	247	248	248	21.1	21.2	21.1	19.9	21.5	20.7	21.2 <sup>2</sup>
Cartoned price, New York, grade A large (cts/doz) 3/	66.4	71.1	61.6	55.6	56.9	55.9	52.7	56.4	52.1	50.9
Price of laying feed (\$/ton)	182	174	170	167	168	176	177	175	175	176
Egg-feed price ratio 1/	6.3	7.0	7.6	5.9	5.8	5.6	5.3	5.8	5.2	4.9
Stocks, first of month										
Shell (mil doz)	.93	.72	1.16	.84	1.20	1.29	2.01	1.59	2.01	.42
Frozen (mil doz)	10.2	10.0	9.8	11.3	13.2	13.1	13.9	13.9	10.7	13.2
Replacement chicks hatched (mil)	407	424	431	40.9	31.2	29.5	28.5	34.8	35.1	35.8

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 12 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Mark Weimar (202) 786-1714.

Table 14.—Dairy

	Annual			1987		1988				
	1985	1986	1987	May	Dec	Jan	Feb	Mar	Apr	May
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.48	11.30	11.23	11.00	11.12	10.91	10.60	10.43	10.33	10.34
Wholesale prices										
Butter, Grade A Chi. (cts/lb)	141.1	144.5	140.2	138.4	134.0	131.9	131.0	131.0	131.0	131.0
Am. cheese, Wis. assembly pt. (cts/lb)	127.7	127.3	123.2	122.0	120.7	118.4	116.1	115.6	115.1	115.0
Nonfat dry milk, (cts/lb) 2/	84.0	80.6	79.3	79.1	77.0	79.8	73.0	73.0	73.1	73.4
USDA net removals										
Total milk equiv. (mil lb) 3/	13,174.1	10,628.1	6,706.0	519.0	746.4	1,628.4	1,486.5	1,091.9	1,235.8	1,227.0
Butter (mil lb)	334.2	287.6	187.3	14.0	18.7	56.4	59.7	36.1	42.7	42.4
Am. cheese (mil lb)	629.0	468.4	282.0	23.2	36.1	46.6	25.4	34.7	35.6	33.0
Nonfat dry milk (mil lb)	940.6	827.3	559.4	58.8	42.4	48.1	39.6	49.8	49.2	53.6
Milk										
Milk prod. 21 States (mil lb)	121,043	121,433	121,094	10,949	10,038	10,205	9,740	10,647	10,593	11,041
Milk per cow (lb)	13,160	13,399	13,932	1,259	1,158	1,177	1,126	1,234	1,229	1,280
Number of milk cows (thou)	9,198	9,063	8,692	8,697	8,667	8,667	8,649	8,630	8,618	8,627
U.S. milk production (mil lb)	143,147	143,381	142,462	6/12,860	6/11,808	6/12,042	6/11,493	6/12,563	6/12,456	6/12,983
Stock, beginning										
Total (mil lb)	16,704	13,695	12,867	13,095	8,147	7,371	7,628	8,462	10,787	10,457
Commercial (mil lb)	4,937	4,590	4,165	4,806	4,696	4,577	4,777	4,910	5,074	5,134
Government (mil lb)	11,767	9,105	8,702	8,288	3,451	2,794	2,852	3,552	5,712	5,323
Imports, total (mil lb) 3/	2,777	2,733	2,490	145	249	235	196	172	172	--
Commercial disappearance milk equiv. (mil lb)	130,640	133,497	135,630	11,931	11,243	10,262	9,895	11,292	11,151	--
Butter										
Production (mil lb)	1,247.8	1,202.4	1,104.1	98.2	108.5	124.7	117.1	116.3	111.7	107.9
Stocks, beginning (mil lb)	296.5	205.5	193.0	247.9	158.5	143.2	157.3	198.3	221.1	239.8
Commercial disappearance (mil lb)	918.2	922.9	902.5	74.9	81.3	65.6	52.0	73.7	76.3	--
American cheese										
Production (mil lb)	2,855.2	2,798.2	2,716.6	262.2	232.6	225.8	221.0	244.6	251.8	258.7
Stocks, beginning (mil lb)	450.9	408.6	370.4	602.8	408.6	370.4	365.7	362.0	365.4	377.0
Commercial disappearance (mil lb)	2,279.1	2,382.8	2,444.1	225.9	227.4	173.5	196.7	209.0	203.6	--
Other cheese										
Production (mil lb)	2,225.7	2,411.1	2,627.6	215.7	237.2	207.0	207.8	239.3	221.3	231.5
Stocks, beginning (mil lb)	101.4	94.1	92.0	91.8	92.6	89.7	90.0	88.4	89.0	92.7
Commercial disappearance (mil lb)	2,515.7	2,684.9	2,880.1	226.3	262.5	224.3	224.8	254.6	232.5	--
Nonfat dry milk										
Production (mil lb)	1,390.0	1,284.1	1,059.0	122.6	90.0	83.8	85.8	95.8	102.6	104.1
Stocks, beginning (mil lb)	1,247.6	1,011.1	686.8	180.5	188.0	177.2	130.7	152.2	151.1	171.4
Commercial disappearance (mil lb)	435.0	479.1	495.1	42.3	28.1	44.0	39.7	53.4	39.0	--
Frozen dessert										
Production (mil gal) 4/	1,251.0	1,248.6	1,263.4	117.8	82.4	76.0	87.6	110.4	107.9	120.1

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area, high heat spray process. 3/ Milk-equivalent, fat-basis. 4/ Ice cream, ice milk, and hard sherbet. 5/ Based on average milk price after adjustment for price-support deductions. 6/ Estimated. -- = not available. P = Preliminary.

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

	Annual			1987		1988				
	1985	1986	1987	May	Dec	Jan	Feb	Mar	Apr	May
U.S. wool price, Boston 1/ (cts/lb)	192	191	265	270	300	315	397	435	453	463
Imported wool price, Boston 2/ (cts/lb)	197	201	247	250	278	295	330	370	441	423
U.S. mill consumption, scoured										
Apparel wool (thou lb)	106,051	126,768	129,677	10,556	11,173	10,106	10,103	13,514	10,138	9,567
Carpet wool (thou lb)	10,562	9,960	13,092	1,190	708	1,323	1,418	1,786	1,344	1,300

1/ Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" and up. 2/ Wool price delivered at U.S. mills, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents.

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

	Annual			1987		1988				
	1985	1986	1987	May	Dec	Jan	Feb	Mar	Apr	May
<b>Cattle on feed (7 States)</b>										
Number on feed (thou head) 1/	8,635	7,920	7,643	7,233	8,412	8,066	7,856	7,572	7,726	7,504
Placed on feed (thou head)	19,346	20,035	21,020	1,984	1,350	1,660	1,369	1,833	1,531	2,170
Marketings (thou head)	18,989	19,263	19,390	1,514	1,577	1,759	1,527	1,573	1,614	1,719
Other disappearance (thou head)	1,132	1,049	1,207	143	119	111	126	106	139	141
<b>Beef steer-corn price ratio, Omaha 2/</b>	23.3	31.0	41.0	40.1	36.7	36.4	37.4	38.4	39.3	38.6
<b>Hog-corn price ratio, Omaha 2/</b>	17.8	27.8	32.8	31.6	23.8	25.0	25.7	23.0	22.5	24.3
<b>Market prices (\$/cwt)</b>										
<b>Slaughter cattle</b>										
Choice steers, Omaha	58.37	57.75	64.60	70.66	63.93	65.00	68.31	71.53	72.71	75.15
Utility cows, Omaha	38.32	37.19	44.83	44.36	46.69	47.83	49.55	49.83	49.41	48.79
Choice vealers, S. St. Paul	58.28	59.92	78.74	90.00	83.00	86.88	87.50	87.50	96.41	97.66
<b>Feeder cattle</b>										
Choice, Kansas City, 600-700 lb.	64.56	62.79	75.36	73.38	78.90	85.00	83.53	85.20	86.50	82.88
<b>Slaughter hogs</b>										
Barrows & gilts, 7-markets	44.77	51.19	51.69	55.58	41.14	44.43	47.01	42.79	42.10	47.55
<b>Feeder pigs</b>										
S. Mo. 40-50 lb. (per head)	37.20	45.62	46.69	51.66	31.74	37.47	44.80	48.65	52.16	46.85
<b>Slaughter sheep &amp; lambs</b>										
Lambs, Choice, San Angelo	68.61	69.46	78.08	94.50	73.83	83.53	77.25	83.75	76.50	72.67
Ewes, Good, San Angelo	34.02	34.78	38.62	36.25	39.88	43.19	38.25	41.17	40.17	36.38
<b>Feeder lambs</b>										
Choice, San Angelo	85.91	73.14	102.26	112.62	105.83	113.63	112.63	111.30	100.25	90.63
<b>Wholesale meat prices, Midwest</b>										
Choice steer beef, 600-700 lb.	90.76	88.98	97.21	107.80	94.50	97.15	99.50	103.47	105.25	111.70
Canner & cutter cow beef	74.13	71.31	83.70	82.05	88.45	88.98	92.18	90.33	89.69	89.88
Pork loins, 8-14 lb. 3/	91.51	104.78	106.23	120.77	84.70	102.43	94.93	87.82	94.03	113.55
Pork bellies, 12-14 lb.	59.50	65.82	63.11	67.21	42.60	51.82	48.40	45.32	43.13	46.09
Hams, skinned, 14-17 lb.	67.50	80.01	80.96	70.98	91.98	66.70	76.67	78.35	68.27	67.70
<b>All fresh beef retail price 4/</b>	--	--	212.64	212.82	218.53	213.95	217.58	219.97	219.68	221.54
<b>Commercial slaughter (thou head)*</b>										
<b>Cattle</b>	36,293	37,288	35,647	2,872	2,899	2,921	2,758	2,896	2,784	2,908
Steers	16,912	17,516	17,443	1,438	1,425	1,464	1,400	1,436	1,448	1,509
Heifers	11,237	11,097	10,906	852	868	891	815	894	823	850
Cows	7,391	7,960	6,610	522	555	519	495	512	462	494
Bulls & stags	758	715	689	60	51	47	48	54	51	55
Calves	3,385	3,408	2,815	200	252	214	210	223	176	179
Sheep & lambs	6,165	5,635	5,200	374	451	390	416	548	404	427
Hogs	84,492	79,598	81,081	6,084	7,813	6,977	6,682	7,680	7,090	6,881
<b>Commercial production (mil lb)</b>										
Beef	23,557	24,213	23,405	1,851	1,924	1,943	1,828	1,925	1,842	1,918
Veal	499	509	416	32	36	32	32	33	28	30
Lamb & mutton	352	331	309	22	28	24	26	35	26	27
Pork	14,728	13,988	14,312	1,071	1,390	1,244	1,183	1,360	1,263	1,231
		Annual		1987				1988		
	1985	1986	1987	I	II	III	IV	I	II	III
<b>Cattle on feed (13 States)</b>										
Number on feed (thou head) 1/	10,653	9,754	9,245	9,245	8,807	8,666	8,992	9,769	9,365	--
Placed on feed (thou head)	23,366	23,583	24,874	5,680	5,906	6,590	6,698	5,796	--	--
Marketings (thou head)	22,887	22,856	22,971	5,747	5,619	6,022	5,583	5,810	6/5,931	--
Other disappearance (thou head)	1,378	1,236	1,379	371	428	242	338	390	--	--
<b>Hogs &amp; pigs (10 States) 5/</b>										
Inventory (thou head) 1/	42,420	41,100	39,690	39,690	38,370	40,880	43,075	42,845	41,145	44,040
Breeding (thou head) 1/	5,348	5,258	5,110	5,110	5,215	5,325	5,300	5,465	5,500	5,625
Market (thou head) 1/	37,072	35,842	34,580	34,580	33,155	35,555	37,775	37,380	35,645	38,415
Farrowings (thou head)	8,831	8,223	8,783	1,916	2,352	2,257	2,259	2,103	2,552	6/2,393
Pig crop (thou head)	67,648	63,835	68,417	14,840	18,601	17,481	17,503	16,331	19,968	--

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Beginning January 1984 prices are for 14-17 lb.; January 1986 prices are for 14-18 lb. 4/ New series estimating the composite price of all beef grades and ground beef sold by retail stores. This new series in addition to but does not replace the series for the retail price of Choice beef that appears in table 8. 5/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 6/ Intentions. \*Classes estimated. -- = not available.

Information contacts: Ron Gustafson or Leland Southard (202) 786-1285.

# Crops and Products

Table 17.—Supply & Utilization<sup>1,2</sup>

	Area			Yield	Production	Total supply 4/7	Feed and residual	Other domestic use	Ex- ports	Total use	Ending stocks	Farm price 5/
	Set aside 3/	Planted	Harvested									
	Mil. acres		Bu/acre				Mil. bu					\$/bu
<b>Wheat</b>												
1983/84	30.0	76.4	61.4	39.4	2,420	3,930	369	742	1,429	2,540	1,399	3.51
1984/85	18.3	79.2	66.9	38.8	2,595	4,003	405	749	1,424	2,578	1,425	3.39
1985/86	18.8	75.6	64.7	37.5	2,425	3,866	279	767	915	2,961	1,905	3.08
1986/87*	20.4	72.1	60.7	34.4	2,092	4,018	408	785	1,004	2,197	1,821	2.42
1987/88*	20.2	65.8	55.9	37.6	2,105	3,941	300	805	1,600	2,705	1,236	2.57
1988/89*	--	--	--	--	1,840	3,121	270	835	1,350	2,455	666	3.45-3.95
<b>Rice</b>												
	Mil. acres		Lb/acre				Mil. cwt (rough equiv.)					\$/cwt
1983/84	1.74	2.19	2.17	4,598	99.7	172.1	--	6/54.9	70.3	125.0	46.9	8.57
1984/85	.79	2.83	2.80	4,954	138.8	187.3	--	6/60.5	62.1	122.6	64.7	8.04
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	--	6/65.8	58.7	124.5	77.3	6.53
1986/87*	1.27	2.38	2.36	5,651	133.4	213.3	--	6/76.3	85.4	161.7	51.6	3.75
1987/88*	1.26	2.35	2.33	5,482	127.7	182.3	--	6/80.8	70.0	150.8	31.5	6.90-7.10
1988/89*	--	--	--	--	159.0	193.7	--	6/83.5	77.0	160.5	33.2	5.00-7.00
<b>Corn</b>												
	Mil. acres		Bu/acre				Mil. bu					\$/bu
1983/84	32.2	60.2	51.5	81.1	4,175	7,700	3,818	975	1,901	6,694	1,006	3.21
1984/85	3.9	80.5	71.9	106.7	7,674	8,684	4,079	1,091	1,865	7,036	1,648	2.63
1985/86	5.4	83.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	6,496	4,040	2.23
1986/87*	13.6	76.7	69.2	119.3	8,250	12,291	4,714	1,192	1,504	7,410	4,882	1.50
1987/88*	21.6	65.7	59.2	119.4	7,064	11,948	4,650	1,236	1,700	7,586	4,365	1.90-2.00
1988/89*	--	--	--	--	5,200	9,570	4,300	1,265	1,650	7,215	2,355	2.45-2.85
<b>Sorghum</b>												
	Mil. acres		Bu/acre				Mil. bu					\$/bu
1983/84	5.7	11.9	10.0	48.7	488	927	385	10	245	640	287	2.74
1984/85	.6	17.3	15.4	56.4	866	1,156	539	18	297	854	300	2.32
1985/86	.9	18.3	16.8	66.8	1,120	1,420	664	28	178	869	551	1.93
1986/87*	2.3	15.3	13.9	67.7	938	1,489	533	15	198	746	743	1.37
1987/88*	3.8	11.8	10.6	69.9	741	1,484	520	14	225	759	725	1.60-1.70
1988/89*	--	--	--	--	560	1,285	475	15	200	690	595	2.20-2.60
<b>Barley</b>												
	Mil. acres		Bu/acre				Mil. bu					\$/bu
1983/84	1.1	10.4	9.7	52.3	509	733	282	170	92	544	189	2.47
1984/85	.5	12.0	11.2	53.4	599	799	304	170	77	551	247	2.29
1985/86	.7	13.2	11.6	51.0	591	848	333	169	22	523	325	1.98
1986/87*	1.8	13.1	12.0	50.8	611	942	296	174	137	606	336	1.61
1987/88*	2.9	11.0	10.0	52.6	527	877	251	174	131	555	321	1.81
1988/89*	--	--	--	--	291	632	235	175	50	460	172	2.40-2.80
<b>Oats</b>												
	Mil. acres		Bu/acre				Mil. bu					\$/bu
1983/84	.3	20.3	9.1	52.6	477	727	466	78	2	546	181	1.62
1984/85	.1	12.4	8.2	58.0	474	689	433	74	1	509	180	1.67
1985/86	.1	13.3	8.2	63.7	521	728	460	82	2	544	184	1.23
1986/87*	.4	14.7	6.9	56.3	386	603	395	73	3	471	133	1.21
1987/88*	1.0	18.0	6.9	54.0	374	552	359	79	1	440	112	1.56
1988/89*	--	--	--	--	255	427	255	85	1	341	86	2.30-2.70
<b>Soybeans</b>												
	Mil. acres		Bu/acre				Mil. bu					\$/bu
1983/84	0	63.8	62.5	26.2	1,636	1,981	7/79	983	743	1,805	176	7.83
1984/85	0	67.8	66.1	28.1	1,861	2,037	7/93	1,030	598	1,721	316	5.84
1985/86	0	63.1	61.6	34.1	2,099	2,415	7/86	1,053	740	1,879	536	5.05
1986/87*	0	60.4	58.3	33.3	1,940	2,476	7/104	1,179	757	2,040	436	4.78
1987/88*	0	57.4	56.4	33.7	1,905	2,341	7/96	1,170	785	2,051	290	6.20
1988/89*	0	--	--	--	1,650	1,940	7/95	1,075	625	1,795	145	6.75-9.25
<b>Soybean oil</b>												
							Mil. lbs					\$/ Cts/lb
1983/84	--	--	--	--	10,872	12,133	--	9,588	1,824	11,412	721	30.60
1984/85	--	--	--	--	11,468	12,209	--	9,917	1,660	11,577	632	29.50
1985/86	--	--	--	--	11,617	12,257	--	10,053	1,257	11,310	947	18.00
1986/87*	--	--	--	--	12,783	13,745	--	10,833	1,187	12,020	1,725	15.40
1987/88*	--	--	--	--	12,828	14,705	--	10,900	2,100	13,000	1,705	22.50
1988/89*	--	--	--	--	11,825	13,600	--	10,900	1,250	12,150	1,450	21.00-26.00
<b>Soybean meal</b>												
							Thou. tons					\$/ ton
1983/84	--	--	--	--	22,756	23,230	--	17,615	5,360	22,975	255	188
1984/85	--	--	--	--	24,529	26,784	--	19,480	4,917	24,397	387	125
1985/86	--	--	--	--	24,951	25,338	--	19,090	6,036	25,126	212	155
1986/87*	--	--	--	--	27,758	27,970	--	20,387	7,343	27,730	240	163
1987/88*	--	--	--	--	27,760	28,000	--	21,050	6,650	27,700	300	225
1988/89*	--	--	--	--	27,500	25,850	--	21,050	5,500	25,550	300	225-275

See footnotes at end of table.

Table 17.— Supply &amp; Utilization, continued

	Area		Harvested	Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price
	Set aside	Planted										
	3/					4/						5/
	Mll. acres		Lb/acre				Mil. bales			Ctns/lb		
Cotton 10/												
1983/84	6.8	7.9	7.3	508	7.8	15.7	--	5.9	6.8	12.7	2.8	65.30
1984/85	2.5	11.1	10.4	600	13.0	15.8	--	5.5	6.2	11.8	4.1	58.70
1985/86	3.6	10.7	10.2	630	13.4	17.6	--	6.4	2.0	8.4	9.4	56.50
1986/87*	3.4	10.0	8.5	552	9.7	19.1	--	7.4	6.7	14.1	5.0	52.40
1987/88*	3.3	10.4	10.0	706	14.8	19.8	--	7.7	6.6	14.3	5.6	64.20
1988/89*	--	--	--	--	13.7	19.3	--	7.0	5.0	12.0	7.4	--

\*July 12, 1988 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, and oats, August 1 for cotton and rice, September 1 for soybeans, corn, and sorghum, October 1 for soybean meal, and soyoil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt. of rice, and 4.59 480-pound bales of cotton. 3/ Includes diversion, PIK, and acreage reduction programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding and Government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Average of crude soybean oil, Decatur. 9/ Average of 44 percent, Decatur. 10/ Upland and extra long staple. Stock estimates based on Census Bureau data which results in an unaccounted difference between supply and use estimates and changes in ending stocks. -- = not available.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food Grains

	Marketing year 1/				1987	1988				
	1983/84	1984/85	1985/86	1986/87	May	Jan	Feb	Mar	Apr	May
Wholesale prices										
Wheat, No. 1 HRW, Kansas City (\$/bu) 2/	3.84	3.74	3.28	2.72	3.02	3.20	3.28	3.10	3.14	3.20
Wheat, DNS, Minneapolis (\$/bu) 2/	4.21	3.70	3.25	2.62	2.76	3.12	3.26	3.05	3.19	3.30
Rice, S.W. La. (\$/cwt) 3/	19.38	17.98	16.11	10.25	10.40	20.60	24.45	24.50	24.00	20.75
Wheat										
Exports (mil bu)	1,429	1,424	915	1,004	72	148	147	151	156	154
Mill grind (mil bu)	701	676	703	755	66	59	58	60	58	65
Wheat flour production (mil cwt)	308	301	314	335	29	26	26	26	26	29
Rice										
Exports (mil cwt, rough equiv)	70.3	62.1	58.7	85.4	8.0	5.9	4.3	5.9	5.0	--
	Marketing year 1/			1986	1987			1988		
	1984/85	1985/86	1986/87	Sept-Nov	Dec-Feb	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May
Wheat										
Stocks, beginning (mil bu)	1,399	1,425	1,905	3,154.6	2,671.5	2,249.8	1,820.9	2,988.5	2,505.3	1,908.5
Domestic use:										
Food (mil bu)	651	683	714	192.2	177.2	180.3	184.9	196.1	175	180
Feed & seed (mil bu) 4/	502	363	548	31.1	47.6	38.7	345.5	-17.7	13	-2
Exports (mil bu)	1,424	915	1,004	263.4	202.7	216.8	409.9	308.5	412	467

1/ Beginning June 1 for wheat and August 1 for rice. 2/ Ordinary protein. 3/ Long-grain, milled basis. 4/ Feed use approximated by residual. -- = not available.

Information contacts: Ed Allen and Janet Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1987	1988				
	1983/84	1984/85	1985/86	1986/87	May	Jan	Feb	Mar	Apr	May
U.S. price, SLM, 1-1/16 in. (cts/lb) 2/	73.1	60.5	60.0	53.2	65.9	59.7	57.8	59.6	60.1	61.6
Northern Europe prices:										
Index (cts/lb) 3/	87.6	69.2	48.9	62.0	76.6	72.2	67.5	66.3	65.8	65.6
U.S. M 1-3/32 in. (cts/lb) 4/	87.1	73.9	64.8	61.8	75.1	72.8	69.8	70.8	72.4	75.3
U.S. mill consumption (thou bales)	5,927	5,545	6,399	7,452	642	621	649	706	610	636
Exports (thou bales)	6,786	6,201	1,969	6,684	488	663	740	779	571	564
Stocks, beginning (thou bales)	7,937	2,775	4,102	9,348	8,428	12,836	12,477	11,273	9,788	8,607

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) index; average of 5 lowest priced of 11 selected growths. 4/ Memphis territory growths.

Information contact: Bob Skinner (202) 786-1840.

Table 20.—Feed Grains

	Marketing year 1/				1987	1988				
	1983/84	1984/85	1985/86	1986/87	May	Jan	Feb	Mar	Apr	May
<b>Wholesale prices</b>										
Corn, No. 2 yellow, Chicago (\$/bu)	3.46	2.79	2.35	1.64	1.89	1.95	2.01	2.03	2.03	2.09
Sorghum, No. 2 yellow, Kansas City (\$/cwt)	5.22	4.46	3.72	2.73	3.10	3.05	3.24	3.27	3.16	3.21
Barley, feed, Duluth (\$/bu) 2/	2.48	2.09	1.53	1.44	1.86	1.72	1.77	1.88	1.94	1.98
Barley, malting, Minneapolis (\$/bu)	2.84	2.55	2.24	1.89	2.12	2.02	2.15	2.08	2.11	2.24
<b>Exports</b>										
Corn (mil bu)	1,902	1,865	1,241	1,504	170.6	134.0	125.0	165.3	167.3	--
Feed grains (mil metric tons) 3/	56.5	56.6	36.6	46.3	5.1	4.1	4.0	5.2	5.2	--
	Marketing year 1/				1987	1988				
	1983/84	1984/85	1985/86	1986/87	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	Apr-Jun
<b>Corn</b>										
Stocks, beginning (mil bu)	3,523	1,006	1,648	4,040	8,248	6,332	4,882	9,769	7,635	5,830
<b>Domestic use:</b>										
Feed (mil bu)	3,818	4,079	4,095	4,717	1,091	768	1,488	1,444	968	--
Food, seed, ind. (mil bu)	975	1,091	1,160	1,191	325	315	292	282	337	--
Exports (mil bu)	1,902	1,865	1,241	1,504	500	368	398	408	500	--
Total use (mil bu)	6,694	7,036	6,496	7,410	1,917	1,451	2,178	2,134	1,804	--

1/ September 1 for corn and sorghum; June 1 for oats and barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Aggregated data for corn, sorghum, oats, and barley. -- \* not available.

Information contact: James Cole (202) 786-1840.

Table 21.—Fats &amp; Oils

	Marketing year 1/				1987		1988			
	1983/84	1984/85	1985/86	1986/87	Apr	Dec	Jan	Feb	Mar	Apr
<b>Soybeans</b>										
Wholesale price, No. 1 yellow, Chicago (\$/bu) 2/	7.78	5.88	5.20	5.03	5.10	5.85	6.13	6.14	6.24	6.64
Crushings (mil bu)	982.7	1,030.5	1,052.8	1,178.8	95.9	110.8	106.7	99.8	107.6	102.6
Exports (mil bu)	742.8	600.7	740.7	756.9	53.9	76.7	77.0	97.0	74.8	65.1
Stocks, beginning (mil bu)	344.6	175.7	316.0	536.0	90.2	155.5	145.0	141.8	139.3	133.8
<b>Soybean oil</b>										
Wholesale price, crude, Decatur (cts/lb)	30.55	29.52	18.02	15.36	15.31	19.00	21.98	20.94	20.22	21.67
Production (mil lb)	10,862.8	11,467.9	11,617.3	12,783.1	1,047.1	1,208.1	1,170.2	1,091.8	1,186.9	1,132.7
Domestic disap. (mil lb)	9,589.6	9,888.5	10,045.9	10,820.1	1,027.1	857.3	804.0	962.9	809.3	1,003.7
Exports (mil lb)	1,813.7	1,659.9	1,257.3	1,184.5	28.2	134.0	25.7	281.0	273.7	87.7
Stocks, beginning (mil lb)	1,260.9	720.5	632.5	946.6	2,352.3	1,833.7	2,050.5	2,390.9	2,238.9	2,342.8
<b>Soybean meal</b>										
Wholesale price, 44% protein, Decatur (\$/ton)	188.21	125.46	154.88	162.61	159.00	214.80	193.75	183.00	191.80	200.40
Production (thou ton)	22,756.2	24,529.9	24,951.3	27,758.8	2,256.4	2,649.3	2,554.4	2,377.1	2,572.8	2,449.9
Domestic disap. (thou ton)	17,538.8	19,481.3	19,117.2	20,387.4	1,593.4	2,012.6	1,825.2	1,475.8	1,649.4	1,654.9
Exports (thou ton)	5,436.1	4,916.5	6,009.3	7,343.0	654.8	652.3	635.0	986.9	984.7	739.1
Stocks, beginning (thou ton)	474.1	255.4	386.9	211.7	235.8	311.8	296.2	390.4	304.9	243.7
<b>Margarine, wholesale price, Chicago, white (cts/lb)</b>										
	46.3	55.5	51.2	40.3	39.38	44.20	46.75	46.00	45.80	47.19

1/ Beginning September 1 for soybeans; October 1 for soymeal and oil; calendar year for margarine. 2/ Beginning April 1, 1982, prices based on 30-day delivery, using upper end of the range.

Information contacts: Roger Hoskin (202) 786-1840; Tom Sickerton (202) 786-1824.

Table 22.—Farm Programs, Price Supports, Participation & Payment Rates

	Target price	Loan rate	Findley loan rate	Payment rates			Base acres	Program 1/	Participation rate 2/
				Deficiency	Paid land diversion	PIK			
			\$/bu.			Percent 3/	Mil. acres	Percent of base	
<b>Wheat</b>									
1983/84	4.30	3.65		.65	2.70	95	90.9	15/5/10-30	78/78/51
1984/85	4.38	3.30		1.00	2.70	.85	94.0	20/10/10-20	60/60/20
1985/86	4.38	3.30		1.08	2.70		94.0	20/10/0	73
1986/87 4/	4.38	3.00	2.40	1.98	2.00	1.10	92.2	22.5/2.5/5-10	85/85/21
1987/88	4.38	2.85	2.28	1.78			91.6	27.5/0/0	87
1988/89	4.23	2.76	2.21	1.53				27.5/0/0	
1989/90								10/0/0	
<b>Rice</b>									
1983/84	11.40	8.14		2.77	2.70	80	3.95	15/5/10-30	98/98/87
1984/85	11.90	8.00		3.76			4.16	25/0/0	85
1985/86	11.90	8.00	5/3.16	3.90	3.50		4.23	20/15/0	89
1986/87 4/	11.90	7.20	5/3.82	4.70			4.20	35/0/0	92
1987/88	11.66	6.84	5/5.75	4.82			4.20	35/0/0	97
1988/89	11.15	6.63	5/7.00	1.65			4.22	25/0/0	85
<b>Corn</b>									
1983/84	2.86	2.65		0	1.50	80	82.6	10/10/10-30	71/71/60
1984/85	3.03	2.55		.43			80.8	10/0/0	54
1985/86	3.03	2.55		.48			84.2	10/0/0	69
1986/87 4/	3.03	2.40	1.92	1.11	.73		81.9	17.5/2.5/0	85
1987/88	3.03	2.28	1.82	1.21	2.00		83.3	20/15/0	88/55
1988/89	2.93	2.21	1.77	1.10	1.75			20/10/0; 0/92	
<b>Sorghum</b>									
1983/84	2.72	2.52		0	1.50	80	18.0	6/ (same)	72/72/53
1984/85	2.88	2.42		.46			18.2		42
1985/86	2.88	2.42		.46			19.3		55
1986/87 4/	2.88	2.28	1.82	1.06	.65		18.7		75
1987/88	2.88	2.18	1.74	1.14	1.90		18.1		83/42
1988/89	2.78	2.10	1.68	1.08	1.65				
<b>Barley</b>									
1983/84	2.60	2.16		.21	1.00		11.0	6/ (same)	55/55/0
1984/85	2.60	2.08		.26			11.6		44
1985/86	2.60	2.08		.52			13.3		57
1986/87 4/	2.60	1.95	1.56	1.04	.57		12.4		73
1987/88	2.60	1.86	1.49	1.11	1.60		12.9		82/23
1988/89	2.51	1.80	1.44	.76	1.40				
<b>Oats</b>									
1983/84	1.60	1.36		.11	.75		9.8	6/ (same)	20/20/0
1984/85	1.60	1.31		0			9.8		14
1985/86	1.60	1.31		.29			9.4		14
1986/87 4/	1.60	1.24	.99	.50	.36		9.5		37
1987/88	1.60	1.18	.94	.55	.80		8.7		44/15
1988/89	1.55	1.13	.90	.30				5/0/0; 0/92	
<b>Soybeans 7/</b>									
1983/84		5.02							
1984/85		5.02							
1985/86		5.02							
1986/87 4/		4.77							
1987/88		4.77							
1988/89									
<b>Upland cotton</b>									
1983/84	76.0	55.00		12.10	25.00	85	15.4	20/5/10-30	93/93/77
1984/85	81.0	55.00		18.60			15.6	25/0/0	70
1985/86	81.0	57.30		23.70	30.00		15.8	20/10/0	82/0/0
1986/87 4/	81.0	55.00	8/44.00	26.00			15.5	25/0/0	93
1987/88	79.4	52.25	9/	17.3			15.3	25/0/0	92
1988/89	75.9	51.80		16.00			15.0	12.5/0/0	

1/ Percentage of base acres farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. In addition to the percentages shown for 1983/84, farmers had the option of submitting bids to retire their entire base acreages. 2/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 3/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1983 and 1984 PIK rates apply only to the 10-30 and 10-20 portions, respectively. 4/ Payment rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 5/ Annual average world market price. 6/ The sorghum, oats and barley programs were the same as for corn each year except 1983/84, when PIK was not offered on barley and oats, and in 1988 for oats. 7/ There are no target prices, acreage programs, or payment rates for soybeans. 8/ Loan repayment rate. 9/ Loans may be repaid at the lower of the loan rate or world market prices.

Information contact: James Cole (202) 786-1840.

Table 23.—Fruit

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987 P
<b>Citrus 1/</b>												
Production (thou ton)	15,242	14,255	13,329	16,484	15,105	12,057	13,608	10,792	10,488	11,014	11,952	12,681
Per capita consumption (lbs) 2/	117.0	115.1	107.5	108.4	112.6	104.4	109.3	120.9	102.9	109.1	110.9	--
<b>Monocitrus 3/</b>												
Production (thou tons)	11,846	12,274	12,460	13,689	15,152	12,961	14,217	14,154	14,292	14,189	13,917	15,949
Per capita consumption (lbs) 2/	84.1	84.5	83.0	85.7	87.3	88.0	89.0	88.0	93.7	92.3	95.7	--
	1987						1988					
<b>F.O.B. shipping point prices</b>	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Apples (\$/carton) 4/	17.60	14.34	11.60	--	7.93	7.83	8.98	7.75	11.50	11.08	10.96	10.98
Pears (\$/box) 5/	21.00	--	--	--	12.00	10.82	9.70	9.26	11.18	8.94	12.88	15.14
Oranges (\$/box) 6/	6.47	6.29	6.18	6.01	7.36	10.23	5.45	6.19	6.24	5.99	6.42	7.87
Grapefruit (\$/box) 6/	4.34	5.58	5.95	5.07	5.07	6.81	5.84	5.34	5.25	4.86	4.50	3.96
<b>Stocks, ending</b>												
Fresh apples (mil lbs)	203.8	74.9	4.2	2,687.1	5,390.2	4,697.2	3,311.6	3,158.9	2,417.4	1,584.1	1,092.7	552.2
Fresh pears (mil lbs)	1.7	11.8	195.2	507.1	425.8	338.8	279.4	198.4	148.4	99.7	49.2	17.9
Frozen fruits (mil lbs)	625.9	865.7	908.3	908.7	957.9	943.1	858.2	790.4	720.1	634.6	593.3	545.9
Frozen orange juice (mil lbs)	1,105.1	942.1	792.6	840.0	652.8	569.0	662.4	980.4	1,073.1	1,004.1	1,018.7	1,124.3

1/ Crop year beginning with year indicated. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red Delicious, Washington, extra fancy, carton tray pack, 80-113's. 5/ D'Anjou, Washington, standard box wrapped, U.S. No. 1, 90-135's. 6/ U.S. equivalent on-tree returns. P = preliminary. -- = not available.

Information contact: Sen Huang (202) 786-1885.

Table 24.—Vegetables

	Calendar year												
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988		
<b>Production</b>													
Total vegetables (1,000 cwt) 1/	382,165	413,925	381,370	379,123	431,515	403,320	457,392	453,769	445,436	462,402			
Fresh (1,000 cwt) 1/ 2/	182,563	190,859	190,228	194,694	207,924	197,919	217,132	217,932	216,267	218,190			
Processed (tons) 3/	9,980,100	11,153,300	9,557,100	9,221,460	11,179,590	10,270,050	12,013,020	11,791,860	11,616,560	12,210,580			
Mushrooms (1,000 lbs)	454,007	470,069	469,576	517,146	490,826	561,531	595,681	587,956	--	--			
Potatoes (1,000 cwt)	366,314	342,447	302,857	338,591	355,131	333,911	362,612	407,109	361,511	385,774			
Sweetpotatoes (1,000 cwt)	13,115	13,370	10,953	12,799	14,833	12,083	12,986	14,853	12,674	12,103			
Dry edible beans (1,000 cwt)	18,935	20,552	26,729	32,751	25,563	15,520	21,070	22,175	22,886	26,309			
	1987						1988						
<b>Shipments</b>	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Fresh (1,000 cwt) 4/	23,887	35,745	23,791	17,075	20,213	16,104	15,445	18,964	17,690	18,523	18,208	19,103	18,361
Potatoes (1,000 cwt)	12,165	12,622	7,631	8,514	11,384	9,718	11,021	10,685	11,759	10,485	11,107	14,970	9,436
Sweetpotatoes (1,000 cwt)	177	98	34	136	322	359	795	518	281	274	435	218	142

1/ 1983 data are not comparable with 1984 and 1985. 2/ Estimate reinstated for asparagus with the 1984 crop; all other years also include broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, and tomatoes. 3/ Estimates reinstated for cucumbers with the 1984 crop; all other years also include snap beans, sweet corn, green peas, and tomatoes. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, and watermelons. -- = not available.

Information contacts: Shannon Hamm or Cathy Greene (202) 786-1884.

Table 25.—Other Commodities

	Annual					1987				1988	
	1983	1984	1985	1986	1987	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June	
<b>Sugar</b>											
Production 1/	5,682	5,890	5,969	6,257	7,278	766	866	3,622	2,090	--	
Deliveries 1/	8,812	8,454	8,035	7,786	8,167	2,001	2,146	2,112	1,951	--	
Stocks, ending 1/	2,570	3,005	3,126	3,227	965	2,476	1,497	965	3,610	--	
<b>Coffee</b>											
Composite green price N.Y. (cts/lb)	131.51	142.95	137.46	185.18	109.14	105.91	99.16	116.12	121.98	121.44 P	
Imports, green bean equiv. (mil lbs) 2/	2,259	2,411	2,550	2,596	2,638	790	645	640	585	730	
	Annual					1987				1988	
<b>Tobacco</b>	1985	1986	1987 P	Mar	Oct	Nov	Dec	Jan	Feb	Mar	
<b>Prices at auctions 3/</b>											
Flue-cured (\$/lb)	1.72	1.52	--	NQ	1.66	1.42	NQ	NQ	NQ	NQ	
Burley (\$/lb)	1.59	1.57	--	NQ	NQ	1.58	1.58	1.51	1.51	NQ	
<b>Domestic consumption 4/</b>											
Cigarettes (bil)	594.0	584.0	577.0	53.0	48.6	52.6	48.5	32.4	46.1	52.3	
Large cigars (mil)	3,226	3,090	2,757	235.5	250.7	213.6	220.2	151.4	192.6	223.9	

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green and processed coffee. 3/ Crop year July-June for flue-cured, October-September for burley. 4/ Taxable removals. P = preliminary. -- = not available. NQ = no quote.

Information contacts: (sugar) Peter Buzzanell (202) 786-1888; (coffee) Fred Gray (202) 786-1888; (tobacco) Verner Grise (202) 786-1890.



Table 26.—World Supply &amp; Utilization of Major Crops, Livestock, &amp; Products

	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88 P	1988/89 F
Million units							
<b>Wheat</b>							
Area (hectare)	237.3	228.8	231.0	229.3	228.0	220.0	
Production (metric ton)	477.3	489.3	511.8	499.8	529.7	504.5	514.2
Exports (metric ton) 1/	98.7	102.0	107.0	85.0	90.7	103.5	96.9
Consumption (metric ton) 2/	460.1	474.1	492.8	495.7	521.7	532.1	533.9
Ending stocks (metric ton) 3/	130.0	145.2	164.2	168.2	176.2	148.6	128.8
<b>Coarse grains</b>							
Area (hectare)	338.7	334.6	334.2	340.8	336.9	323.1	
Production (metric ton)	783.9	687.2	814.1	841.8	834.1	787.3	742.6
Exports (metric ton) 1/	90.0	93.4	100.4	83.2	83.4	82.6	84.2
Consumption (metric ton) 2/	753.3	758.3	781.0	777.8	809.2	806.4	803.2
Ending stocks (metric ton) 3/	181.4	110.8	143.9	207.8	232.7	213.6	152.9
<b>Rice, milled</b>							
Area (hectare)	140.6	144.3	144.4	144.9	145.1	142.1	
Production (metric ton)	286.5	308.6	319.0	319.1	318.3	305.1	324.7
Exports (metric ton) 4/	11.9	12.6	11.5	12.8	12.7	10.8	12.4
Consumption (metric ton) 2/	286.5	305.1	311.0	320.7	322.6	314.5	322.4
Ending stocks (metric ton) 3/	43.3	46.7	54.8	53.8	49.6	40.2	42.5
<b>Total grains</b>							
Area (hectare)	716.6	707.7	709.6	715.0	710.0	685.2	
Production (metric ton)	1,547.7	1,485.1	1,644.9	1,660.7	1,682.1	1,596.9	1,581.8
Exports (metric ton) 1/	200.6	208.0	218.9	181.0	186.8	196.9	193.5
Consumption (metric ton) 2/	1,499.9	1,537.5	1,584.8	1,594.2	1,653.5	1,653.0	1,659.5
Ending stocks (metric ton) 3/	354.7	302.7	362.9	429.8	458.5	402.4	324.2
<b>Oilseeds</b>							
Crush (metric ton)	143.5	135.8	150.6	154.7	161.1	165.7	168.0
Production (metric ton)	178.2	165.0	191.1	196.0	194.2	205.1	205.2
Exports (metric ton)	35.2	33.0	33.1	34.5	37.6	38.6	36.1
Ending stocks (metric ton)	20.5	15.7	21.1	26.7	23.3	21.8	17.2
<b>Meals</b>							
Production (metric ton)	98.1	92.5	101.8	104.7	110.0	113.0	113.7
Exports (metric ton)	31.6	29.7	32.3	34.4	36.4	36.3	37.0
<b>Oils</b>							
Production (metric ton)	43.4	42.1	46.1	49.4	50.4	52.2	53.2
Exports (metric ton)	14.0	13.7	15.5	16.3	17.0	17.7	17.3
<b>Cotton</b>							
Area (hectare)	31.4	31.0	33.9	31.9	29.9	32.5	
Production (bale)	68.1	65.6	88.2	79.6	70.4	80.0	84.2
Exports (bale)	19.5	19.2	20.2	20.4	25.9	23.9	23.6
Consumption (bale)	68.3	68.3	70.0	75.7	82.4	82.2	82.3
Ending stocks (bale)	25.2	23.9	42.3	47.1	34.4	32.4	33.8
	1982	1983	1984	1985	1986	1987	1988 F
<b>Red meat</b>							
Production (mil metric tons)	94.8	97.5	99.3	103.3	105.6	105.4	107.4
Consumption (mil metric tons)	93.3	95.8	97.4	101.2	104.7	103.8	106.2
Exports (mil metric tons) 1/	5.8	5.9	5.9	6.2	6.6	6.5	6.7
<b>Poultry</b>							
Production (mil metric tons)	23.7	24.4	25.2	26.2	27.3	29.0	30.1
Consumption (mil metric tons)	23.3	24.3	24.8	25.9	26.9	28.5	29.7
Exports (mil metric tons) 1/	1.4	1.3	1.3	1.2	1.3	1.4	1.4
<b>Dairy</b>							
Milk production (mil metric tons)	396.9	413.0	413.4	417.8	423.9	419.0	421.0

1/ Excludes Intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years and do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1983 data correspond with 1982/83, etc. P = preliminary. F = forecast.

Information contacts: Frederic Surls (202) 786-1824; (red meat & poultry) Linda Bailey (202) 786-1286; (dairy) Sara Short (202) 786-1769.

# U.S. Agricultural Trade

Table 27.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1987		1988				
	1985	1986	1987	May	Dec	Jan	Feb	Mar	Apr	May
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu)	3.73	3.19	3.11	3.28	3.43	3.53	3.60	3.42	3.47	3.54
Corn, f.o.b. vessel, Gulf ports (\$/bu)	2.89	2.27	1.95	2.08	2.13	2.22	2.24	2.30	2.29	2.28
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu)	2.64	2.16	1.88	2.01	1.98	2.06	2.13	2.17	2.09	2.12
Soybeans, f.o.b. vessel, Gulf ports (\$/bu)	5.83	5.45	5.55	5.71	6.16	6.45	6.46	6.55	6.92	7.38
Soybean oil, Decatur (cts/lb)	27.03	16.36	15.85	15.93	18.77	21.64	20.79	20.08	21.49	23.39
Soybean meal, Decatur (\$/ton)	127.15	157.62	175.57	175.70	214.51	193.30	184.39	191.01	199.98	224.40
Cotton, 8 market avg. spot (cts/lb)	58.55	53.47	64.35	65.94	62.25	59.70	57.83	59.66	60.07	61.55
Tobacco, avg. price at auction (cts/lb)	171.55	153.96	144.34	141.45	144.79	150.08	149.27	149.27	141.22	141.22
Rice, f.o.b. mill, Houston (\$/cwt)	18.49	14.60	13.15	10.50	21.00	21.00	24.50	24.06	24.00	21.20
Inedible tallow, Chicago (cts/lb)	14.33	9.03	13.79	15.13	15.56	18.00	17.08	17.25	16.17	16.17
Import commodities										
Coffee, N.Y. spot (\$/lb)	1.42	2.01	1.09	1.09	1.19	1.19	1.28	1.27	1.23	1.22
Rubber, N.Y. spot (cts/lb)	41.91	42.87	50.65	49.06	54.01	54.59	53.75	54.92	55.68	58.62
Cocoa beans, N.Y. (\$/lb)	.99	.88	.87	.90	.82	.86	.78	.73	.71	.74

Information contact: Mary Teymourian (202) 786-1820.

Table 28.—Indexes of Nominal & Real Trade-Weighted Dollar Exchange Rates

	1987						1988					
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Total U.S. trade 1/												
Nominal	99	99	97	97	92	90	91*	91*	90*	89*	90*	93*
Agricultural trade												
Nominal 2/	14,245	14,933	15,794	16,859	18,559	21,384	24,555	28,566	33,610	38,783	46,513	54,912
Real 3/	85	85	84	83	81	80	80*	80*	79*	78*	78*	77*
Soybeans												
Nominal 2/	412	428	444	460	491	600	596	606	612	611	612	614
Real 3/	71	71	69	69	66	65	64*	64*	64*	63*	64*	65*
Wheat												
Nominal 2/	83,997	88,101	93,144	99,717	109,724	126,159	145,327	169,807	200,627	232,272	279,552	330,913
Real 3/	106	104	103	102	99	97	99*	104*	104*	106*	107*	99*
Corn												
Nominal 2/	13,013	13,642	14,427	15,392	16,943	19,547	22,412	26,038	30,593	35,262	42,239	49,821
Real 3/	75	74	73	72	69	69	69*	69*	68*	67*	67*	68*
Cotton												
Nominal 2/	269	269	292	267	280	282	282	281	279	281	280	287
Real 3/	88	87	86	86	85	83	83*	82*	82*	80*	80*	80*

1/ Federal Reserve Board index of trade-weighted exchange value of the U.S. dollar against 10 other major industrial country currencies, plus Switzerland. These currencies dominate the financing of U.S. total trade. 2/ Nominal values are percentage changes in currency units per dollar, weighted by proportion of agricultural exports from the United States. An increase indicates that the dollar has appreciated. 3/ The real index deflates the nominal series by consumer price changes of the countries involved, resulting in divergence between nominal and real indexes when high-inflation countries figure significantly. The nominal Federal Reserve index shows little divergence between nominal and real indexes because of similar inflation rates among the countries included. \*Preliminary.

Information contact: Tim Baxter, Dave Stallings (202) 786-1706.

Table 29.—Trade Balance

	Fiscal years*									
	1980	1981	1982	1983	1984	1985	1986	1987	1988 F	Apr 1988
\$ million										
Exports										
Agricultural	40,481	43,780	39,097	34,769	38,027	31,201	26,309	27,859	33,500	3,054
Nonagricultural	169,846	185,423	176,308	159,373	170,014	179,236	176,628	202,331	--	22,443
Total 1/	210,327	229,203	215,405	194,142	208,041	210,437	202,937	230,190	--	25,497
Imports										
Agricultural	17,276	17,218	15,485	16,373	18,916	19,740	20,875	20,643	21,000	1,721
Nonagricultural	223,590	237,469	233,349	230,527	297,736	313,722	342,855	367,381	--	32,820
Total 2/	240,866	254,687	248,834	246,900	316,652	333,462	363,730	388,024	--	34,541
Trade balance										
Agricultural	23,205	26,562	23,612	18,396	19,111	11,461	5,434	7,216	12,500	1,333
Nonagricultural	-53,744	-52,046	-57,041	-71,154	-127,722	-134,486	-166,227	-165,050	--	-10,377
Total	-30,539	-25,484	-33,429	-52,758	-108,611	-123,025	-160,793	-157,834	--	-9,044

\*Fiscal years begin October 1 and end September 30. Fiscal year 1987 began Oct. 1, 1986 and ended Sept. 30, 1987. 1/ Domestic exports including Department of Defense shipments (F.A.S. value). 2/ Imports for consumption (customs value). F = forecast. -- = not available.

Information contact: Steve MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports &amp; Imports

	Fiscal year*				Apr	Fiscal year*				Apr
	1985	1986	1987	1988 F	1988	1985	1986	1987	1988 F	1988
	Thousand units					\$ million				
<b>EXPORTS</b>										
Animals, live (no) 1/	996	570	275	--	25	255	344	331	--	16
Meats & preps., excl. poultry (mt)	427	451	548	2/500	50	906	1,012	1,300	--	145
Dairy products (mt)	423	480	445	--	25	414	431	490	500	32
Poultry meats (mt)	234	265	376	400	32	257	282	406	--	32
Fats, oils, & greases (mt)	1,217	1,355	1,220	3/1,200	117	608	477	417	--	48
Hides & skins incl. furskins	--	--	--	--	--	1,325	1,440	1,666	--	156
Cattle hides, whole (no) 1/	25,456	25,596	24,337	--	1,819	1,019	1,131	1,254	--	120
Mink pelts (no) 1/	2,237	2,697	2,760	--	419	60	65	103	--	14
Grains & feeds (mt)	93,903	74,358	90,213	--	10,513	13,285	9,472	9,059	4/11,800	1,153
Wheat (mt)	28,523	25,501	28,204	39,000	4,159	4,264	3,260	2,877	5/4,400	446
Wheat flour (mt)	718	1,094	1,305	1,200	45	164	203	207	--	8
Rice (mt)	1,972	2,382	2,454	2,300	164	677	648	551	--	54
Feed grains, incl. products (mt)	55,362	36,236	47,605	52,300	5,200	6,884	3,817	3,752	4,600	481
Feeds & fodders (mt)	6,533	8,392	10,113	6/11,000	878	1,004	1,286	1,455	--	138
Other grain products (mt)	795	1,015	750	--	80	293	332	284	--	29
Fruits, nuts, and preps. (mt)	1,907	2,003	2,141	--	209	1,687	1,766	2,049	--	171
Fruit juices incl. froz. (hl) 1/	4,641	3,652	4,362	--	601	200	148	185	--	26
Vegetables & preps. (mt)	1,420	1,442	1,625	--	140	946	997	1,174	--	105
Tobacco, unmanufactured (mt)	257	224	224	200	26	1,588	1,318	1,204	1,200	137
Cotton, excl. linters (mt)	1,277	482	1,306	1,400	124	1,945	678	1,419	2,200	190
Seeds (mt)	289	269	305	--	20	352	367	371	400	21
Sugar, cane or beet (mt)	355	375	582	--	23	65	75	113	--	7
Oilseeds & products (mt)	23,803	27,583	29,653	--	2,649	6,195	6,271	6,293	7,700	673
Oilseeds (mt)	17,886	20,684	21,833	21,400	1,826	4,324	4,394	4,408	--	466
Soybeans (mt)	16,621	20,139	21,322	21,200	1,772	3,876	4,174	4,191	4,900	423
Protein meal (mt)	4,606	5,614	6,786	6,200	683	853	1,132	1,347	1,400	148
Vegetable oils (mt)	1,311	1,284	1,035	--	139	1,018	746	538	--	79
Essential oils (mt)	12	7	8	--	1	105	105	111	--	10
Other	443	568	564	--	51	1,069	1,126	1,271	--	132
<b>Total</b>	<b>125,967</b>	<b>109,862</b>	<b>129,210</b>	<b>145,500</b>	<b>13,980</b>	<b>31,201</b>	<b>26,309</b>	<b>27,859</b>	<b>33,500</b>	<b>3,054</b>
<b>IMPORTS</b>										
Animals, live (no) 1/	2,120	1,885	1,994	--	158	569	637	610	700	48
Meats & preps., excl. poultry (mt)	1,123	1,139	1,282	--	112	2,214	2,248	2,797	--	238
Beef & veal (mt)	674	693	778	790	72	1,295	1,252	1,575	1,700	156
Pork (mt)	416	406	462	500	37	847	900	1,125	1,100	75
Dairy products (mt)	418	400	461	465	23	763	786	849	900	59
Poultry and products 1/	--	--	--	--	--	93	101	112	--	7
Fats, oils, & greases (mt)	21	22	21	--	2	18	17	18	--	1
Hides & skins, incl. furskins 1/	--	--	--	--	--	240	200	304	--	19
Wool, unmanufactured (mt)	43	53	59	--	5	145	160	197	--	30
Grains & feeds (mt)	2,070	2,311	2,336	2,600	236	604	668	727	700	64
Fruits, nuts, & preps., excl. juices (mt)	4,483	4,637	4,835	4,725	497	1,891	1,976	2,178	--	218
Bananas & plantains (mt)	3,022	3,042	3,106	3,100	265	752	740	817	800	74
Fruit juices (hl) 1/	35,112	31,539	33,888	30,000	1,687	995	698	728	--	54
Vegetables & preps. (mt)	2,140	2,199	2,446	2,550	241	1,347	1,560	1,509	1,600	145
Tobacco, unmanufactured (mt)	191	208	224	175	20	556	606	634	600	46
Cotton, unmanufactured (mt)	31	41	38	--	4	17	14	7	--	1
Seeds (mt)	92	89	133	120	29	91	111	156	100	20
Nursery stock & cut flowers 1/	--	--	--	--	--	318	353	369	--	37
Sugar, cane or beet (mt)	2,338	1,905	1,492	900	76	912	654	497	--	29
Oilseeds & products (mt)	1,271	1,508	1,572	1,650	118	784	639	579	600	62
Oilseeds (mt)	253	197	165	--	21	98	69	56	--	6
Protein meal (mt)	159	138	245	--	16	17	15	30	--	2
Vegetable oils (mt)	859	1,173	1,162	--	81	670	555	493	--	54
Beverages excl. fruit juices (hl) 1/	15,494	15,488	15,549	--	1,236	1,622	1,848	1,923	--	157
Coffee, tea, cocoa, spices (mt)	1,868	1,940	1,915	--	133	4,983	6,099	4,867	--	329
Coffee, incl. products (mt)	1,128	1,223	1,207	1,200	75	3,244	4,400	3,232	2,700	196
Cocoa beans & products (mt)	539	507	503	550	40	1,285	1,189	1,088	1,300	80
Rubber & allied gums (mt)	799	801	824	840	69	680	615	714	900	78
Other	--	--	--	--	--	900	885	868	--	79
<b>Total</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>19,740</b>	<b>20,875</b>	<b>20,643</b>	<b>21,000</b>	<b>1,721</b>

\*Fiscal years begin October 1 and end September 30. Fiscal year 1987 began Oct. 1, 1986 and ended Sept 30, 1987. 1/ Not included in total volume. 2/ Forecasts for footnoted items 2/-6/ are based on slightly different groups of commodities. Fiscal 1987 exports of categories used in the 1988 forecasts were 2/ 503 thousand mt. 3/ 1,204 thousand mt. 4/ 9,302 million. 5/ 3,086 million, i.e. includes flour. 6/ 10,003 thousand mt. 7/ Less than 500,000. F = forecast. -- = not available.

Information contact: Steve MacDonald (202) 786-1822.

Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*				Apr	Change from year* earlier				Apr
	1985	1986	1987	1988 F	1988	1985	1986	1987	1988 F	1988
	\$ million					Percent				
Western Europe	7,183	6,848	7,203	7,600	641	-22	-5	5	6	29
European Community (EC-12)	6,668	6,432	6,771	7,100	595	-23	-4	5	4	29
Belgium-Luxembourg	470	361	423	--	0	-44	-23	17	--	-100
France	396	431	494	--	0	-22	9	15	--	-100
Germany, Fed. Rep.	900	1,001	1,266	--	92	-29	11	26	--	7
Italy	677	693	733	--	0	-12	2	6	--	-100
Netherlands	1,926	2,042	1,950	--	167	-14	6	-5	--	22
United Kingdom	628	628	662	--	59	-20	0	5	--	10
Portugal	502	308	268	--	16	-28	-39	-13	--	-14
Spain, incl. Canary Islands	832	723	654	--	69	-32	-13	-10	--	120
Other Western Europe	515	415	432	500	45	-16	-19	4	25	23
Switzerland	232	128	145	--	0	-26	-45	13	--	-100
Eastern Europe	532	447	453	600	83	-28	-16	1	20	38
German Dem. Rep.	81	52	66	--	0	-39	-36	27	--	-88
Poland	126	42	63	--	28	-36	-66	50	--	146
Yugoslavia	137	134	131	--	35	-24	-2	-2	--	230
Romania	88	112	115	--	11	-43	27	3	--	-52
USSR	2,525	1,105	659	1,700	306	1	-56	-40	143	168
Asia	11,933	10,494	11,989	15,200	1,304	-22	-12	14	27	30
West Asia (Mideast)	1,452	1,243	1,663	2,100	140	-22	-14	34	24	-6
Turkey	129	111	117	--	13	-42	-13	5	--	-51
Iraq	371	335	524	800	59	-12	-10	56	60	14
Israel	300	255	244	--	27	-15	-15	-4	--	120
Saudia Arabia	381	335	489	500	23	-23	-12	46	0	-48
South Asia	599	517	345	--	33	-31	-14	-33	--	205
Bangladesh	205	94	111	--	2	31	-54	18	--	138
India	129	90	93	--	11	-66	-30	3	--	91
Pakistan	228	285	98	400	19	-20	25	-66	300	100
China	239	83	235	500	73	-65	-65	183	150	267
Japan	5,663	5,139	5,553	6,600	610	-18	-9	8	18	23
Southeast Asia	842	724	707	--	84	-31	-14	-2	--	56
Indonesia	204	172	152	--	21	-53	-16	-12	--	118
Philippines	285	269	259	400	25	-5	-6	-4	33	16
Other East Asia	3,138	2,788	3,485	4,300	363	-14	-11	25	23	36
Taiwan	1,342	1,109	1,354	1,600	124	-5	-17	22	14	30
Korea, Rep.	1,400	1,277	1,693	2,100	199	-23	-9	33	24	48
Hong Kong	396	400	436	500	41	-3	1	9	25	8
Africa	2,527	2,134	1,784	2,200	213	-12	-16	-16	22	71
North Africa	1,207	1,401	1,279	1,600	155	-22	16	-9	23	57
Morocco	156	159	196	--	21	-54	2	23	--	90
Algeria	220	329	244	600	57	36	50	-26	200	106
Egypt	766	875	761	800	62	-13	14	-13	0	3
Sub-Saharan	1,320	733	505	600	58	-1	-44	-31	20	122
Nigeria	367	158	67	--	1	6	-57	-58	--	-76
Rep. S. Africa	189	70	49	--	3	-64	-63	-30	--	-6
Latin America & Caribbean	4,570	3,598	3,765	4,000	332	-13	-21	5	5	11
Brazil	557	445	418	300	5	27	-20	-6	-25	-66
Caribbean Islands	771	752	829	--	69	-7	-2	10	--	2
Central America	361	334	377	--	29	-9	-7	13	--	-5
Colombia	238	137	115	--	23	8	-42	-16	--	342
Mexico	1,566	1,114	1,215	1,300	126	-20	-29	9	8	-5
Peru	106	108	140	--	11	-53	2	30	--	56
Venezuela	721	493	459	600	57	-7	-32	-7	20	108
Canada	1,727	1,466	1,776	2,000	158	-11	-15	21	11	0
Oceania	204	216	230	200	17	-6	6	6	0	7
Total	31,201	26,309	27,859	33,500	3,054	-18	-16	6	20	35
Developed countries	15,225	13,954	15,014	16,700	1,452	-21	-8	8	11	23
Less developed countries	12,680	10,719	11,499	14,000	1,141	-15	-15	7	22	27
Centrally planned countries	3,296	1,636	1,347	2,800	462	-16	-50	-18	115	138

\*Fiscal years begin October 1 and end September 30. Fiscal year 1987 began Oct. 1, 1986 and ended Sept. 30, 1987. F = forecast. -- = not available.

Note: Adjusted for transshipments through Canada.

Information contact: Steve MacDonald (202) 786-1822.

# Farm Income

Table 32.—Farm Income Statistics

	Calendar years										
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F
	\$ billion										
1. Farm receipts	114.3	133.8	142.0	144.1	147.1	141.1	146.7	149.2	140.2	141	145 to 150
Crops (incl. net CCC loans)	53.2	62.3	71.7	72.5	72.3	67.1	69.4	74.4	63.6	61	68 to 70
Livestock	59.2	69.2	68.0	69.2	70.3	69.4	72.9	69.8	71.6	75	76 to 78
Farm related 1/	1.9	2.2	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5	5 to 7
2. Direct Government payments	3.0	1.4	1.3	1.9	3.5	9.3	8.4	7.7	11.8	17	11 to 13
Cash payments	3.0	1.4	1.3	1.9	3.5	4.1	4.0	7.6	8.1	7	4 to 6
Value of PIK commodities	0.0	0.0	0.0	0.0	0.0	5.2	4.5	0.1	3.7	10	5 to 7
3. Total gross farm income (4+5+6) 2/	128.4	150.7	149.3	166.3	163.5	153.1	174.7	166.0	159.5	169	168 to 173
4. Gross cash income (1+2)	117.3	135.1	143.3	146.0	150.6	150.4	155.1	156.9	152.0	159	162 to 167
5. Nonmoney income 3/	9.3	10.6	12.3	13.8	14.3	13.5	13.4	11.8	10.8	10	8 to 10
6. Value of inventory change	1.9	5.0	-6.3	6.5	-1.4	-10.9	6.2	-2.7	-3.3	-1	-4 to -6
7. Cash expenses 4/	84.2	101.7	109.1	113.2	112.5	113.3	116.3	109.6	100.1	103	105 to 108
8. Total expenses	103.2	123.3	133.1	139.4	140.0	140.4	142.7	133.7	122.1	123	124 to 127
9. Net cash income (4-7)	33.1	33.4	34.2	32.8	38.1	37.1	38.8	47.3	52.0	56	53 to 59
10. Net farm income (3-8)	25.2	27.4	16.1	26.9	23.5	12.7	32.0	32.3	37.5	46	40 to 45
Deflated (1982\$)	34.9	34.9	18.8	28.6	23.5	12.2	29.7	29.1	32.9	39	34 to 42
11. Off-farm income	29.7	33.8	34.7	35.8	36.4	37.0	38.3	42.5	44.7	48	48 to 50
12. Loan charges 5/: Real estate	7.6	13.0	9.3	9.4	4.0	2.3	-1.1	-6.0	-9.6	-8	-2 to -4
13.       5/: Nonreal estate	8.3	10.9	5.9	6.2	3.4	0.9	-0.8	-9.6	-10.7	-5	-2 to -4
14. Rental income plus monetary change	4.1	6.3	6.1	6.4	6.3	5.3	8.9	8.8	7.8	8	8 to 10
15. Capital expenditures 5/	17.9	19.9	18.0	16.8	13.3	12.7	12.5	9.6	8.6	8	9 to 11
16. Net cash flow (9+12+13+14-15)	35.1	43.7	37.5	37.9	38.4	32.9	33.3	30.9	30.9	43	47 to 52

1/ Income from machine hire, custom work, sales of forest products, and other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food and imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, and farm household expenses. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast.

Information contact: Richard Kadi (202) 786-1808.

Table 33.—Balance Sheet of the U.S. Farming Sector

	Calendar years 1/										
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F
	\$ billion										
<b>Assets</b>											
Real estate	601.9	706.2	782.9	784.7	748.8	739.6	639.6	558.9	510.1	523	534 to 544
Non-real estate	175.3	201.6	213.2	212.0	212.2	205.4	208.9	191.2	181.5	191	188 to 194
Livestock & poultry	51.3	61.4	60.6	53.5	53.0	49.7	49.6	46.3	47.6	58	57 to 61
Machinery & motor vehicles	75.5	85.8	93.1	101.4	102.0	100.8	96.9	87.6	80.3	78	78 to 82
Crops stored 2/	25.3	29.2	33.0	29.1	27.7	23.7	29.6	23.1	18.4	19	14 to 18
Financial assets	23.1	25.3	26.5	28.0	29.5	31.3	32.8	34.2	35.0	37	36 to 38
Total farm assets	777.2	907.8	996.1	996.7	961.0	945.0	848.5	750.1	691.6	714	725 to 735
<b>Liabilities</b>											
Real estate 3/	66.7	79.7	89.6	98.7	102.5	104.8	103.7	97.7	88.1	81	76 to 80
Non-real estate 4/	60.7	71.8	77.1	83.6	87.0	87.9	87.1	77.5	66.8	62	56 to 60
Total farm liability	127.4	151.6	166.8	182.3	189.5	192.7	190.8	175.2	155.0	143	132 to 142
Total farm equity	649.7	756.2	829.3	814.4	771.5	752.3	657.7	574.9	536.6	571	590 to 600
	Percent										
<b>Selected ratios</b>											
Debt-to-assets	16.4	16.7	16.7	18.3	19.7	20.4	22.5	23.4	22.4	20	17 to 20
Debt-to-equity	19.6	20.0	20.1	22.4	24.6	25.6	29.0	30.5	28.9	25	20 to 24
Debt-to-net cash income 385	454	454	488	556	497	519	492	371	298	245	230 to 247

1/ As of December 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 786-1798.

Table 34.—Cash Receipts from Farm Marketings, by State

Region State	Livestock & Products				Crops 1/				Total 1/			
	1986	1987	Mar 1988	Apr 1988	1986	1987	Mar 1988	Apr 1988	1986	1987	Mar 1988	Apr 1988
	\$ million 2/											
North Atlantic												
Maine	223	243	19	19	143	170	14	14	365	413	33	33
New Hampshire	72	66	6	6	38	38	3	3	109	104	9	9
Vermont	361	377	31	29	36	35	2	2	398	412	33	31
Massachusetts	131	124	11	11	292	269	14	18	423	393	25	29
Rhode Island	12	12	1	1	63	63	4	6	75	75	5	7
Connecticut	210	196	15	15	162	170	13	17	372	366	29	32
New York	1,809	1,800	151	143	724	724	44	51	2,533	2,524	195	194
New Jersey	150	140	12	12	430	424	25	35	580	563	37	46
Pennsylvania	2,239	2,319	204	199	926	911	78	80	3,165	3,230	282	278
North Central												
Ohio	1,566	1,614	131	131	2,043	1,807	139	150	3,610	3,422	270	281
Indiana	1,852	1,856	143	138	2,258	2,017	142	130	4,110	3,873	286	269
Illinois	2,143	2,262	173	179	4,737	3,913	334	361	6,880	6,174	507	540
Michigan	1,236	1,285	106	100	1,429	1,220	93	90	2,664	2,505	200	190
Wisconsin	4,164	4,220	363	345	892	802	35	35	5,057	5,022	398	380
Minnesota	3,395	3,645	304	301	2,680	2,170	128	146	6,074	5,815	432	446
Iowa	4,982	5,270	442	396	4,124	3,510	207	272	9,106	8,780	649	668
Missouri	1,930	2,173	206	190	1,586	1,516	120	100	3,516	3,690	325	290
North Dakota	676	760	73	62	1,623	1,548	90	87	2,299	2,308	163	149
South Dakota	1,525	1,910	159	165	938	815	56	49	2,463	2,725	215	214
Nebraska	4,260	4,848	364	448	2,669	1,975	100	90	6,928	6,823	464	538
Kansas	3,447	3,914	358	397	1,978	1,806	135	99	5,425	5,720	493	496
Southern												
Delaware	402	370	32	31	118	114	6	8	520	484	38	39
Maryland	814	734	62	60	371	394	25	57	1,186	1,129	87	117
Virginia	1,127	1,244	112	124	486	454	20	16	1,613	1,698	132	140
West Virginia	156	169	14	15	71	57	2	2	227	226	17	17
North Carolina	2,174	2,081	156	159	1,608	1,593	41	52	3,782	3,674	197	212
South Carolina	455	461	37	38	440	472	15	15	894	933	52	53
Georgia	1,882	1,826	157	160	1,324	1,254	54	56	3,206	3,080	211	215
Florida	1,000	1,102	105	101	3,688	4,088	533	645	4,688	5,190	638	746
Kentucky	1,311	1,506	103	98	1,079	913	49	36	2,389	2,419	151	135
Tennessee	1,033	1,107	107	97	891	826	37	49	1,924	1,933	143	146
Alabama	1,431	1,560	176	159	578	588	30	43	2,009	2,148	206	202
Mississippi	1,044	1,040	91	92	741	938	39	37	1,785	1,978	130	130
Arkansas	2,017	2,116	160	158	1,005	1,027	64	43	3,022	3,144	223	201
Louisiana	503	521	46	47	869	898	27	33	1,372	1,419	74	80
Oklahoma	1,875	2,052	187	185	746	681	45	36	2,622	2,734	232	221
Texas	5,516	6,059	520	555	2,928	3,013	219	176	8,444	9,072	739	730
Western												
Montana	720	760	66	65	493	587	55	41	1,213	1,347	121	106
Idaho	884	926	100	96	1,042	1,121	56	61	1,925	2,047	155	157
Wyoming	455	528	42	58	111	114	4	4	566	643	46	62
Colorado	2,218	2,321	205	225	890	873	50	45	3,109	3,194	255	270
New Mexico	708	817	49	62	302	332	18	15	1,010	1,148	68	77
Arizona	699	774	88	103	796	1,019	133	57	1,495	1,793	221	160
Utah	437	462	37	36	134	136	9	8	570	599	46	44
Nevada	160	167	14	14	72	76	7	6	232	243	21	20
Washington	981	979	87	87	1,812	1,829	108	100	2,793	2,808	196	187
Oregon	649	655	56	52	1,135	1,200	62	59	1,784	1,855	118	110
California	4,446	4,741	415	444	9,602	10,535	698	707	14,049	15,276	1,113	1,151
Alaska	10	11	1	1	19	18	1	1	29	29	2	2
Hawaii	84	88	8	7	491	494	42	40	575	582	49	48
United States	71,573	76,213	6,505	6,615	63,612	61,550	4,227	4,284	135,185	137,763	10,732	10,899

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of the end of current month. Rounded data may not add.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts from Farming

	Annual						1987		1988			
	1982	1983	1984	1985	1986	1987	Apr	Dec	Jan	Feb	Mar	Apr
	\$ million											
Farm marketings & CCC loans *	142,594	136,580	142,314	144,193	135,185	137,763	10,033	12,426	13,247	10,194	10,732	10,899
Livestock & products	70,257	69,437	72,936	69,780	71,573	76,213	6,448	5,930	6,613	6,051	6,505	6,615
Meat animals	40,917	38,893	40,832	38,589	39,137	44,716	3,861	3,403	4,183	3,889	4,001	4,153
Dairy products	18,234	18,763	17,944	18,063	17,824	17,829	1,499	1,518	1,406	1,286	1,495	1,458
Poultry & eggs	9,520	9,979	12,192	11,191	12,678	11,487	943	872	865	753	863	852
Other	1,586	1,801	1,968	1,937	1,934	2,182	146	137	159	123	145	153
Crops	72,338	67,143	69,378	74,413	63,612	61,550	3,585	6,496	6,633	4,143	4,227	4,284
Food grains	11,412	9,713	9,576	9,080	5,948	5,409	150	425	421	421	347	237
Feed crops	17,409	15,535	15,831	22,479	17,849	13,020	465	1,323	1,614	846	812	773
Cotton (lint and seed)	4,457	3,705	3,270	3,730	2,920	4,006	90	922	718	444	240	166
Tobacco	3,342	2,768	2,841	2,722	1,918	1,827	22	384	215	30	1	23
Oil-bearing crops	13,817	13,546	13,894	12,595	10,507	10,798	569	1,122	1,487	731	748	803
Vegetables & melons	8,063	8,462	9,142	8,558	8,705	9,221	897	412	1,032	531	804	823
Fruits & tree nuts	6,846	6,064	6,768	6,836	6,900	7,761	344	836	523	522	433	405
Other	6,993	7,352	8,057	8,413	8,865	9,507	1,047	1,071	624	619	841	1,054
Government payments	3,492	9,295	8,430	7,704	11,813	16,747	1,653	1,417	71	105	1,160	859
Total	146,086	145,875	150,744	151,897	146,998	154,510	11,686	13,843	13,318	10,299	11,892	11,758

\* Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar years									
	1979	1980	1981	1982	1983	1984	1985	1986	1987 F	1988 F
	\$ million									
Feed	19,314	20,971	20,855	18,592	21,725	19,852	18,015	16,179	16,100	16,500 to 18,500
Livestock	13,012	10,670	8,999	9,684	8,814	9,498	8,996	9,609	11,900	10,000 to 12,000
Seed	2,904	3,220	3,428	3,172	2,993	3,448	3,350	2,984	3,000	3,000 to 4,000
Farm-origin inputs	35,230	34,861	33,282	31,448	33,532	32,798	30,361	28,772	31,000	29,000 to 34,000
Fertilizer	7,369	9,491	9,409	8,018	7,067	7,429	7,259	5,787	5,400	5,500 to 6,500
Fuels & oils	5,635	7,879	8,570	7,888	7,503	7,143	6,584	4,790	4,400	4,200 to 5,200
Electricity	1,447	1,526	1,747	2,041	2,146	2,166	2,150	2,121	2,400	2,000 to 3,000
Pesticides	3,436	3,539	4,201	4,282	4,154	4,767	4,817	4,331	4,600	3,600 to 4,600
Manufactured inputs	17,887	22,435	23,927	22,229	20,870	21,505	20,810	17,029	16,900	16,000 to 19,000
Short-term interest	6,868	8,717	10,722	11,349	10,615	10,396	8,821	7,795	7,100	5,500 to 6,500
Real estate interest 1/	6,190	7,544	9,142	10,481	10,815	10,733	9,878	9,131	8,100	7,500 to 8,500
Total interest charges	13,058	16,261	19,864	21,830	21,430	21,129	18,699	16,926	15,200	13,000 to 15,000
Repair & operation 1/ 2/	6,754	7,075	7,021	6,428	6,529	6,416	6,370	6,426	6,500	6,500 to 7,500
Hired labor	8,981	9,293	8,931	10,075	9,726	9,729	9,792	9,875	10,800	10,000 to 12,000
Machine hire & custom work	2,063	1,823	1,984	2,025	1,896	2,170	2,184	1,791	2,000	1,200 to 2,200
Marketing, storage, & transportation	3,162	3,070	3,523	4,301	3,904	4,012	4,127	3,652	3,800	3,500 to 4,500
Misc. operating expenses 1/	6,771	6,881	6,909	7,262	8,439	8,450	7,942	7,344	8,200	7,000 to 8,000
Other operating expenses	27,732	28,142	28,368	30,889	31,143	31,433	30,579	29,519	31,300	29,000 to 34,000
Capital consumption 1/	19,345	21,474	23,573	24,287	23,873	23,105	20,891	18,997	17,300	17,000 to 18,000
Taxes 1/	3,871	3,891	4,246	4,036	4,469	4,059	4,231	4,125	4,300	3,700 to 4,700
Net rent to non-operator landlord	6,182	6,075	6,184	6,059	5,060	8,640	8,124	6,684	6,900	7,300 to 8,300
Other overhead expenses	29,398	31,440	34,003	34,381	33,402	35,805	33,247	29,806	28,500	28,000 to 31,000
Total production expenses	123,305	133,139	139,444	139,978	140,375	142,669	133,696	122,052	123,000	123,000 to 126,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses includes other livestock purchases and dairy assessments. Totals may not add because of rounding. F = forecast.

Information contacts: Richard Kodl (202) 786-1808; Chris McGath (202) 786-1804.

Table 37.—CCC Net Outlays by Commodity &amp; Function

COMMODITY/PROGRAM	Fiscal years										
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 E	1989 E
	\$ million										
Feed grains	1,144	1,286	-533	5,397	6,815	-758	5,211	12,211	13,967	12,568	11,050
Wheat	308	879	1,543	2,238	3,419	2,536	4,691	3,440	2,836	1,083	1,524
Rice	49	-76	24	164	664	333	990	947	906	189	320
Upland cotton	141	64	336	1,190	1,363	244	1,553	2,142	1,786	42	229
Tobacco	157	-88	-51	103	880	346	455	253	-346	-433	-323
Dairy	24	1,011	1,894	2,182	2,528	1,502	2,085	2,337	1,166	1,227	936
Soybeans	4	116	87	169	288	-585	711	1,597	-476	-1,069	-305
Peanuts	27	28	28	12	-6	1	12	32	8	3	1
Sugar	313	-405	-121	-5	49	10	184	214	-65	-14	--
Honey	-2	9	8	27	48	90	81	89	73	70	56
Wool	39	35	42	54	94	132	109	123	152	125	127
Operating expense	97	157	159	294	328	362	346	457	535	568	583
Interest expenditure	238	518	220	-13	3,525	1,064	1,435	1,411	1,219	836	1,196
Export programs	417	-669	-940	65	398	743	134	102	276	449	512
Other	656	-113	1,340	-225	-1,542	1,295	-314	486	571	2,013	1,234
<b>Total</b>	<b>3,612</b>	<b>2,752</b>	<b>4,036</b>	<b>11,652</b>	<b>18,851</b>	<b>7,315</b>	<b>17,683</b>	<b>25,841</b>	<b>22,408</b>	<b>17,657</b>	<b>17,140</b>
<b>FUNCTION</b>											
Price support loans	2	-66	174	7,015	8,438	-27	6,272	13,628	12,199	8,222	5,514
Direct payments	1,811	418	1,030	1,491	3,600	2,117	7,827	6,746	5,862	3,983	6,023
Purchases	10	1,681	1,602	2,031	2,540	1,470	1,331	1,670	-479	-633	399
Producer storage payments	247	254	32	679	964	268	329	485	832	565	522
Processing, storage, & transportation	128	259	323	355	665	639	657	1,013	1,659	1,494	1,058
Operating expense	97	157	159	294	328	362	346	457	535	568	583
Interest expenditure	238	518	220	-13	3,525	1,064	1,435	1,411	1,219	836	1,196
Export programs	417	-669	-940	65	398	743	134	102	276	449	512
Other	662	200	1,436	-265	-1,607	679	-648	329	305	2,173	1,333
<b>Total</b>	<b>3,612</b>	<b>2,752</b>	<b>4,036</b>	<b>11,652</b>	<b>18,851</b>	<b>7,315</b>	<b>17,683</b>	<b>25,841</b>	<b>22,408</b>	<b>17,657</b>	<b>17,140</b>

E = estimated in the fiscal 1989 President's Budget. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 447-5148

## Transportation

Table 38.—Rail Rates; Grain &amp; Fruit/Vegetable Shipments

	Annual			1987		1988				
	1985	1986	1987 P	May	Dec	Jan	Feb	Mar	Apr	May
Rail freight rate index 1/ (Dec 1984=100)										
All products	100.0	100.7	100.1	100.2	100.1	103.3	103.3 P	103.4 P	105.2 P	105.1 P
Farm products	99.0	99.6	99.3	99.2	99.3	101.9	102.0 P	102.3 P	105.0 P	103.2 P
Grain	98.3	98.9	98.7	98.5	98.5	101.2	101.2 P	101.6 P	102.9 P	102.7 P
Food products	100.1	99.9	98.6	98.8	98.7	101.5	102.4 P	102.4 P	103.8 P	103.9 P
Grain shipments										
Rail carloadings (thou cars) 2/	22.9	24.4	29.0	26.2	29.0 P	30.8 P	33.2 P	34.2 P	33.0 P	31.9 P
Fresh fruit & vegetable shipments										
Piggy back (thou cwt) 3/ 4/	602	629	575	864	478 P	428 P	473 P	484 P	539 P	768 P
Rail (thou cwt) 3/ 4/	532	563	654	810	742 P	785 P	613 P	635 P	533 P	715 P
Truck (thou cwt) 3/ 4/	8,298	9,031	9,187	10,197	8,383 P	8,980 P	8,766 P	9,622 P	10,506 P	11,554 P
Cost of operating trucks hauling produce 5/										
Owner operator (cts/mile)	116.1	113.1	116.3	115.5	118.5	118.1	118.3	118.3	118.9	118.5
Fleet operation (cts/mile)	116.7	113.6	116.5	115.8	118.3	118.0	118.1	117.7	118.4	118.3

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1987 and 1988. 5/ Office of Transportation, USDA. P = Preliminary.

Information contact: T.O. Hutchinson (202) 786-1840.



## Indicators of Farm Productivity and Input Use

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Table 39.—Indexes of Farm Production Input Use & Productivity

(See the June 1988 issue.)

Information contact: Jim Hauven (202) 786-1459.

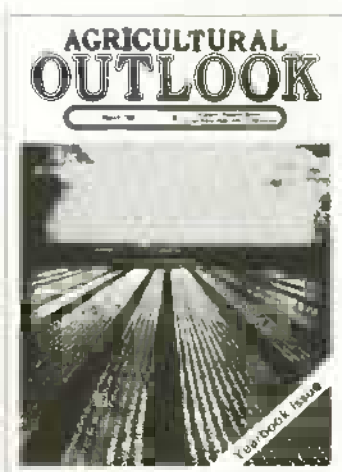
## Food Supply and Use

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Table 40.—Per Capita Food Consumption Indexes (1967 = 100)

(See the May 1988 issue.)

Information contact: Judy Putnam (202) 786-1870.



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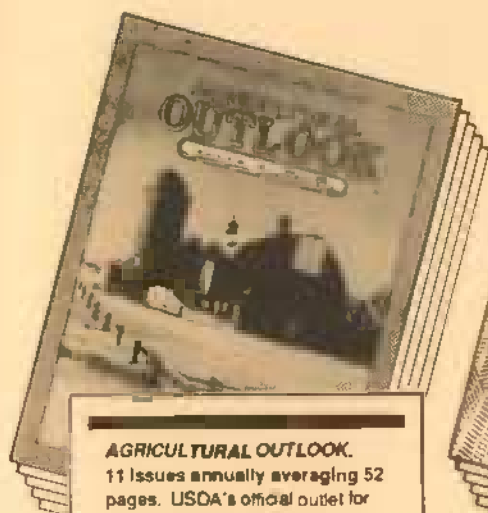
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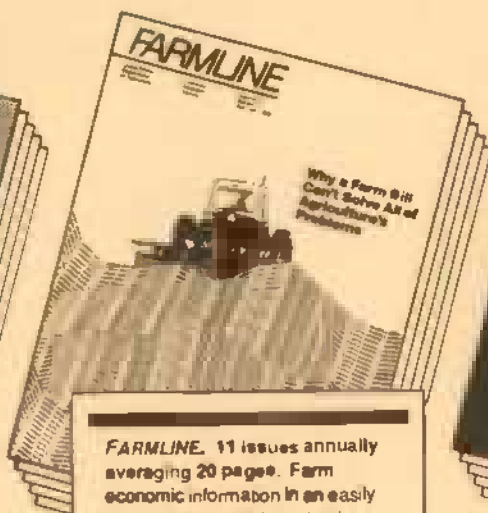
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